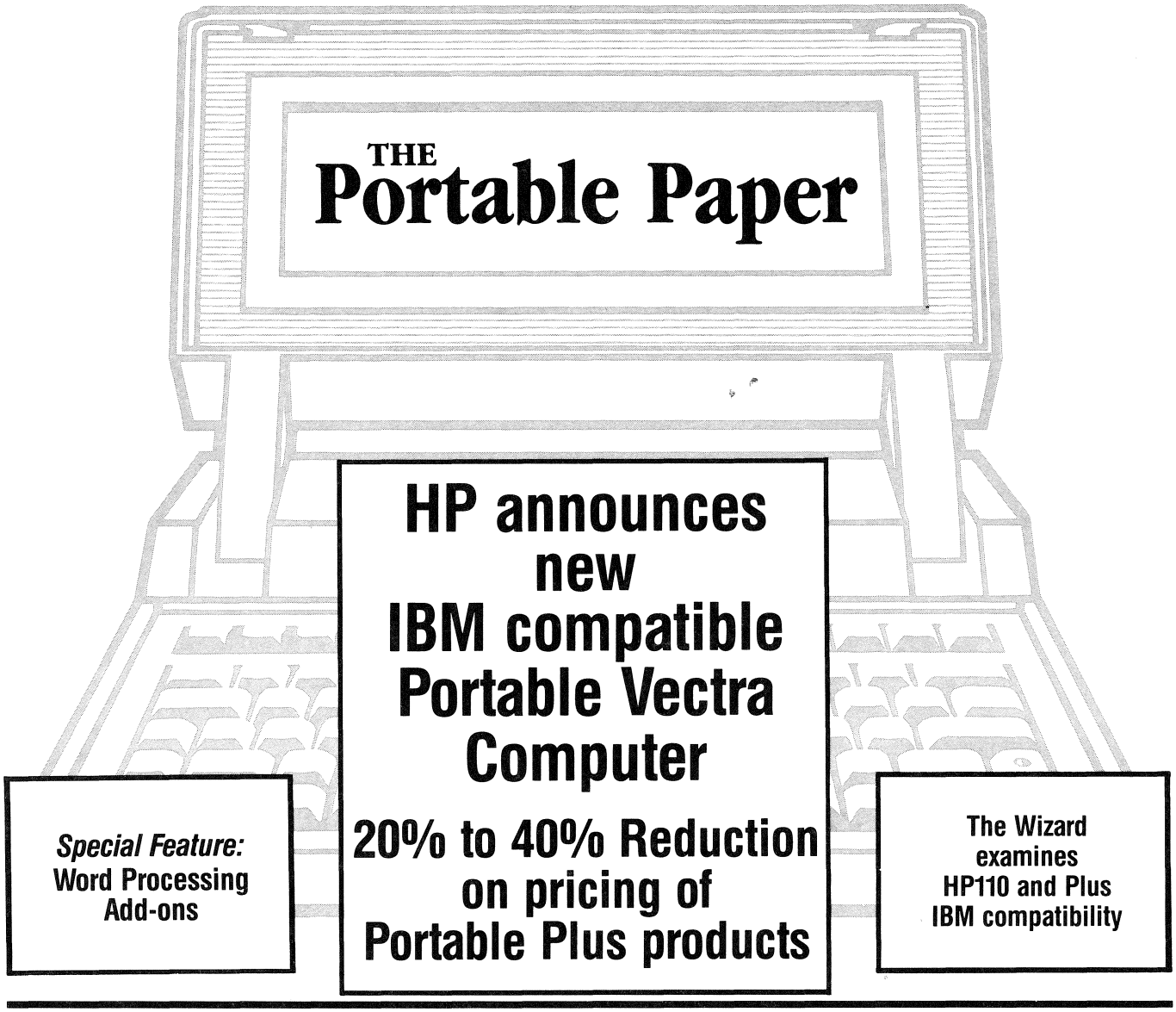
Volume 2, Number 5 The HP Portable/Portable Plus Users Newsletter September / October, 1987



THE Portable Paper

HP announces new IBM compatible Portable Vectra Computer

20% to 40% Reduction on pricing of Portable Plus products

Special Feature: **Word Processing Add-ons**

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Add Megabytes of RAM–and ROM–inside your Portable Plus!

Leave that bulky disk drive in your closet! Now your 8-pound Portable Plus is all you'll ever need to run your programs and access your files!

With the advent of the Portable Plus, Hewlett-Packard solved almost every problem of computer portability. The machine is rugged, weighs only 8 pounds, stores software on ROM chips, and has non-volatile memory.

But as every user knows, the Plus has one major drawback: limited memory space. Until now, if you needed even a modest amount of space for data files and application programs, you were forced to carry an external disk drive wherever you went.

Now all that is changed. Because now you can boost your Portable Plus's memory by as much as 4 *megabytes*. How? Simply by installing special 1- or 2-megabyte RAM cards in the bottom of your Portable Plus.

MEGABYTES PER CARD

The RAM cards have been developed by SoftWord, of Surrey, England. As SoftWord's exclusive U.S. distributor, Personalized Software is currently offering two kinds of cards:

- **2 Megabyte RAM Cards.**
- **1 Megabyte RAM/ROM Cards** containing 1 megabyte of RAM and 8 sockets for ROM chips. Each ROM socket can hold up to 128K of data or software on ROM.

"A" DRIVE AND "C" DRIVE

Each kind of SoftWord card comes in two different varieties: "A-drive" and "C-drive." The difference lies in how the RAM memory on the card is used in your system:

RAM that's on an *A-drive Card* becomes part of your Portable Plus's main—Edisk memory (the internal memory you partition using the P.A.M. System config menu). RAM that's on a *C-drive Card* doesn't affect your Plus's main/Edisk memory; instead it functions as electronic disk storage, just as though it were an external disk drive. (Usually it will be the C drive, but if you have an HP9114 plugged into your system, the memory card becomes the D drive.)

EASY TO INSTALL AND USE

At the bottom of your Portable Plus, there are two compartments designed to hold HP's RAM and ROM expansion drawers. Any of the SoftWord cards can be installed in either of these two compartments. All you do is remove whatever drawer may be in there and replace with a SoftWord card.

Note: We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase. Please call for current trade-in prices.

Once installed, the extra RAM on the SoftWord cards works exactly like ordinary Portable Plus memory, only there's lots more of it.

HOW TO CHOOSE

The examples in the box at the far right will help you examine your options. (For most users, the ideal configuration will either be the one in Example 2 or Example 4.)

Note: If you only purchase *one* SoftWord card, we recommend you get the C-drive variety rather than the A-drive variety. There are three reasons for this:

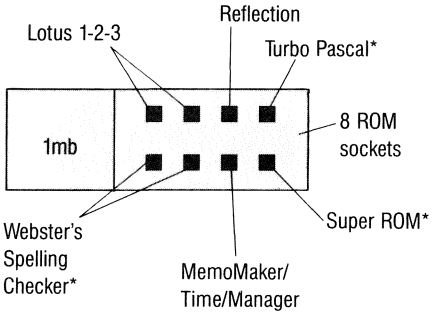
1. If you reset your Portable Plus using the Battery Reset button, you will lose whatever is in the A-drive memory, but what's in the C-drive memory will be retained.
2. A C-drive Card allows you to utilize whatever extra RAM drawer memory you may already be using for your A drive (see Example 1); by contrast, a 2 Megabyte RAM A-drive Card must be used *in place* of an existing RAM drawer.
3. With a C-drive Card in your system, you have, in effect, two built-in disk drives—the A drive, and the C drive that's on the card. By storing copies of critical data and programs on *both* drives, you protect yourself against disaster if your A drive becomes corrupted (which, as you may know, can happen).*

WHOLE NEW MACHINE

The minute you install your new SoftWord card(s), your Portable Plus becomes an entirely new machine. You'll be able to run large applications like WordPerfect or RightWriter—or even an entire integrated package like T/Master—and still have plenty of room left over to manipulate large

AN EXAMPLE OF
HOW TO USE ROM SOCKETS

There are many ways to utilize the 8 ROM sockets on a 1 Megabyte RAM/ROM card. Here's one combination of programs you might find useful:



*Available from Personalized Software

*There is one potential drawback to using a C-drive Card: You cannot directly back up your C drive to an IBM PC or HP150 that has an HP-IL interface card if the PC or 150 has a hard disk of more than 10 megabytes. (In such cases, you can back up your C drive to an external disk drive or to your A drive, and then copy your files to the PC or 150 from there.)

data files, *all without the need for an external disk drive.*

In addition, you'll enjoy the faster access time that comes with RAM storage, and the convenience of not having to hassle with disks all the time. (You should, of course, continue to use disks to back up your files occasionally as a safety measure. So don't bury your disk drive *too* far back in your closet!)

DOUBLE GUARANTEE

SoftWord's RAM cards are manufactured to extremely high standards by a company in the Netherlands that has more than seven years of experience in designing and fabricating memory expansion devices for Hewlett-Packard hand-helds and portables. Reliability is assured by extensive testing.

All SoftWord cards come with a one-year manufacturer's warranty covering parts and labor. Should a problem develop, simply send the card to us, and we will ship it to and from SoftWord at our expense.

In addition, the cards are covered by our own money-back guarantee: If you are not satisfied with a SoftWord card, you can return it within 60 days for a full refund.

By boosting your Plus's memory into the megabytes, you gain the ultimate flexibility in portable computing. Order one or more SoftWord cards, risk-free, today.

2 Megabyte RAM A-drive Card or C-drive Card . . . . . $2995.
$2695 for Portable Paper subscribers.

1 Megabyte RAM/ROM A-drive Card or C-drive Card . . . . . $1995.
$1695 for Portable Paper subscribers.

IMPORTANT: Be sure to specify "A-drive Card" or "C-drive Card" on the order form.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

Non U.S. Customers:

Please order directly from SoftWord. Here is their full product line and price list (prices include shipping and insurance):

384 RAM Card £575

½ Megabyte RAM A-drive Card or C-drive Card . £800
(Upgrade to 1 Megabyte) £500

1 Megabyte RAM A-drive Card or C-drive Card . £1200

2 Megabyte RAM A-drive Card or C-drive Card . £1800

1 Megabyte RAM/ROM A-drive Card or C-drive Card £1200

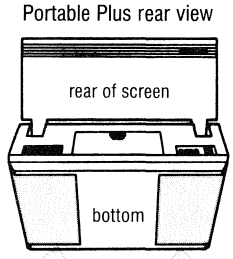
UK residents please add Value Added Tax at the applicable rate.

SoftWord, Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England. Telephone: National: Bagshot (0276) 75440. International: +44276 75440

ADDING MEGABYTES

Here are some ways you can use SoftWord's A-drive Cards and C-drive Cards to expand the capacity of your Portable Plus:

(Note: 1 megabyte =1024K)



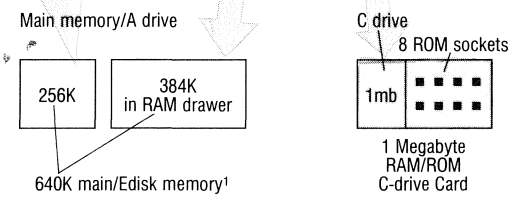
Portable Plus's built-in memory

Compartments at bottom of Portable Plus

EXAMPLE 1: **1.64 megabytes**

1 Megabyte RAM/ROM C-drive Card installed in a Portable Plus having 256K of built-in memory and 384K of extra memory purchased from HP.

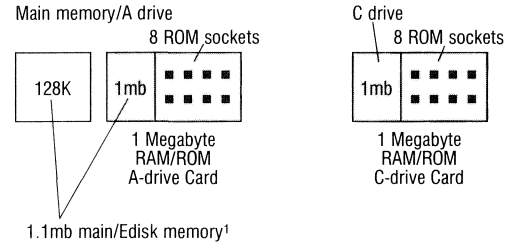
Gives you: 640K of main/Edisk memory, 8 ROM sockets, and an additional 1mb of C-drive storage.



EXAMPLE 2: **2.1 megabytes**

1 Megabyte RAM/ROM A-drive Card and **1 Megabyte RAM/ROM C-drive Card** installed in a Portable Plus having 128K of built-in memory. (Recommended for users who may need more than 8 sockets filled with software on ROM.)

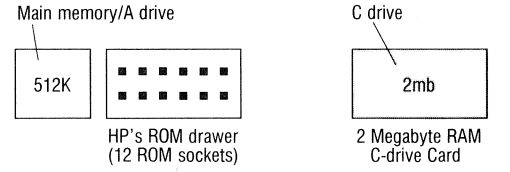
Gives you: 1.1mb of main/Edisk memory, 16 ROM sockets, and an additional 1mb of C-drive storage.



EXAMPLE 3: **2.5 megabytes**

2 Megabyte RAM C-drive Card installed in a Portable Plus having 512K of built-in memory and HP's ROM drawer.

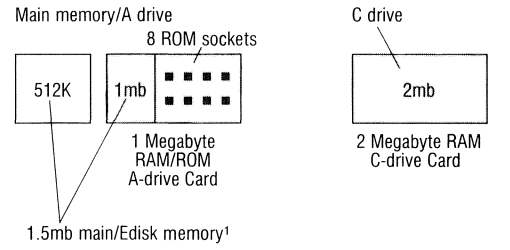
Gives you: 512K of main/Edisk memory, 12 ROM sockets, and 2mb of C-drive memory.



EXAMPLE 4: **3.5 megabytes**

1 Megabyte RAM/ROM A-drive Card and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.

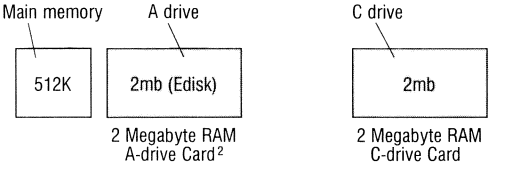
Gives you: 1.5mb of main/Edisk memory, 8 ROM sockets, and an additional 2mb of electronic disk storage.



EXAMPLE 5: **4.5 megabytes**

2 Megabyte RAM A-drive Card[3] and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.

Gives you: 512K of main memory and an additional 4mb of storage. (No ROM sockets are available in this configuration.)



[1] Can be partitioned in any ratio in normal manner, with maximum main memory of 512K.

[2] A 2 megabyte RAM A-drive Card will only work in a Portable Plus having 512K of built-in memory. In the Portable Plus, 2.5mb of main/Edisk memory can only be partitioned as 512K main memory, 2mb Edisk.

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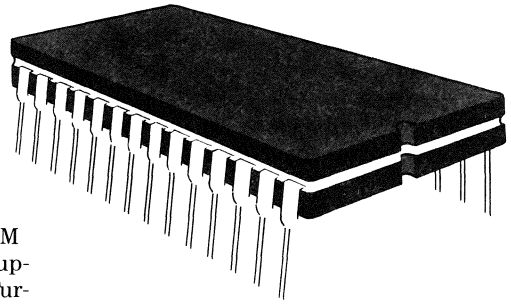
Great news for Portable Plus users:

Our best-selling Portable software now on ROM chips



Pack your favorite programs into just a few slots in your ROM drawer!
- ***Save valuable memory space***
- ***Eliminate need for disk drive***
  —Custom ROMs available too!

Now you can simultaneously free up memory space in your Portable Plus and save yourself the trouble of using a disk drive.

How? It's simple: Some of our best-selling software products are now available on ROM Backup—as many as five products per chip. Insert one or more of our ROM Backup chips in your ROM drawer and you'll never have to load those programs again.

It's the ultimate in convenience. It's much faster than running programs off a disk drive. And it leaves your computer's internal memory free for data and other programs.

ROM BACKUP: HOW IT WORKS

Before we could offer software on ROM to our customers, we thoroughly researched the field, locating the most reliable sources of Roms and ROM services. In addition, we have formed special ROM agreements with our leading software suppliers, including Borland International (Turbo Pascal), Simon & Schuster (Webster's Spelling Checker), and Southern Software (SideWinder).

For numerous legal, economic, and logistical reasons, we offer ROMs to you as a Backup Service. This means you may purchase a product on ROM provided you already own the product on disk. (If you purchased a disk product from us—Personalized Software—we have that in our records. If you purchased a product elsewhere, you must show us proof of purchase before we can sell you the ROM Backup.)

Also, it is important that you read and adhere to the licensing agreement that comes with the disk-based version of the software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you may use the software on only one computer system. Remember, you are buying a *backup* copy of your software, not a second copy.

Having to buy both the disk version and its ROM Backup is not without advantages. For one thing, many disk products include extra utilities that have to be deleted from the ROM chips in order to save space. Also, if your ROM drawer gets full, you can remove a ROM chip and still run the corresponding program off your disk drive.

EASY TO INSTALL

We supply a ROM insertion tool (makes installation simple), plus clear instructions with diagrams.

LIFETIME MONEY-BACK GUARANTEE

Our ROM Back-Up Service comes with a lifetime guarantee: If a ROM proves defective at any time—as long as you own the computer in which it is installed—we will replace it at no charge.

In addition, our regular 60-day guarantee of satisfaction also applies: If, within 60 days, you are dissatisfied with a ROM Backup product for any reason, you may return it for a full refund. However, we don't think you'll be dissatisfied. You'll find these ROMs to be fast, reliable, and an incredible boost to your productivity.

Whatever your reason: to free up valuable memory space. . . to minimize the need for an external disk drive. . . or for sheer convenience, order one or more of our best-selling programs on ROM Backup today.

To order, enter products and prices in special ROM Backup section at bottom of order form in back of this issue.■

SOFTWARE AVAILABLE ON ROM

Here are the programs we're offering on ROM Backup. (For product details, see individual ads elsewhere in this issue.) Note that in many cases you can save space in your ROM drawer by buying two or more programs on the same chip. All our ROMs come with complete, easy-to-follow installation instructions.

IMPORTANT: You must own (or order) the disk versions of any products you buy on ROM Backup. To order, use order form inside back cover.

	Product	*Notes*	*Size of ROM*	*Prices*
	Shelp	Includes improved version of note extraction program.	32K	$55.
	SideWinder	Does not include any of the utility programs that come with the disk-based version of SideWinder.	32K	$55.
	The Editor		64K	$95.
★	HPrint		64K	$95.
	Shelp + SideWinder	Same versions as on 32K ROM chips (see above), plus SideWinder enhancement utility.	64K	$95.
★	Sketch		64K	$95.
	Turbo Pascal	Includes RUN.COM, which can save 10K of disk space from any program you compile with Turbo.	64K	$95.
	Typing Whiz		64K	$95.
	Best of DOS Tools	Contains selected utilities from Portable Utilities Disk, Vol. 1: DOS Tools*	128K	$129.
	Super ROM The Editor Shelp SideWinder Mini PrinterTalk Format110	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications. Shelp and SideWinder are the same versions as on the 32K ROM chips—see above.	128K	$149.
★	RightWriter		256K (Two 128K ROMs)	$179.
	Webster's Spelling Checker	Also includes two useful utilites—DiskPacks and New Mode—at no extra charge.	256K (Two 128K ROMs)	$179.

*Utilities included in the ***Best of DOS Tools*** ROM Backup are as follows. For program details, see Portable Utilities ad in this issue.

PACK	VDL	MOVE	WHEREIS	PRNCONF	TRIM	DIRS
CLEAN	TY	TJETA	CHANGE	SDL	FGREP	SQPC
COPYNEW	ARCE	RENDIR	ASK	MOVEALL	LABEL	FDUMP
DUMP	TMA	OFF	TEE	WAIT	BEEP	TRANSLIT
DIRALL	CYPHER	FCOPY	ARC520	FDATE	XCOPY	SM

Note: ARC520 is shareware; the author normally requests a $35 contribution. However, you do not need to send any money. We've already paid your user fee.

★ —NEW

ABOUT ROMS

A ROM ("Read-Only Memory") is a microelectronic chip that stores programs or other data. Once information is "burned in" to a ROM, it cannot be altered.

A different form of ROM, called an EPROM, *can* be altered once information is burned in. (EPROM stands for Erasable Programmable Read-Only Memory.)

Although blank ROMs are in general less expensive than blank EPROMs, the initial burn-in costs for ROMs are much higher. ROMs also require a much longer lead time to produce than EPROMs. Currently, EPROMs that can be run on the HP Portables come in 16K, 32K, and 64K sizes. ROMs are 128K.

We use EPROMs for our 32K and 64K backup chips, and ROMs for our 128K packages.

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PUBLISHER'S MESSAGE

Hal Goldstein

On September 1, HP introduced the IBM PC compatible, HP Portable Vectra CS Personal Computer. HP also announced a 20- to 40-percent price reduction of Portable Plus computers, 1 Megabyte memory cards, and external HP9114B disk drives.

How good is the new Portable, and how does it compare with its competitors? What does this dual announcement mean to HP110 and Portable Plus users?

As you will see in our feature story, the new Portable Vectra looks quite good on first impression and stands up well with its competition. The effect on current Portable users is hard to tell.

The drastic cost reduction of the Portable Plus, along with the attention the HP will get with the introduction of the Portable Vectra, might mean good things for the Portable Plus. The price decrease and publicity might mean that HP finally will be able to educate the marketplace about the value of the powerful, light-weight, self-contained, RAM- and ROM-based HP Portable unit.

My strong hope is that HP will not throw away its leadership role in the Portable industry by abandoning its ROM and non-volatile RAM, disk-based technology. Whether or not HP stays in this RAM/ROM arena, you can be sure that, eventually, other Portable manufacturers will pick up the idea and produce IBM PC-compatible RAM- and ROM-based machines. It is just too good of an approach to Portable computing not to catch on in the general marketplace.

It's exciting to see how the personal computer industry and, in particular, the portable computer industry, develops. As owners of HP Portables, we help pioneer this new marketplace. We play a significant role in the industry's growth, and we have a wonderful vantage point to watch the drama of this young enterprise unfold.

This issue contains the normal assortment of tips, tricks and tutorials; profiles; and product reviews. The issue features ways you can expand the capacity of your Portable word processing with reviews of eight Portable spelling checkers, a grammar and style checker, and four text-enhancement programs. The issue also features a discussion of IBM compatibility in our regular Wizardry and Looking Glass columns.

Hal Goldstein

Letters

Why Not Bundle ROMs?

Could you please explain why I can't purchase software in ROM without purchasing the disc version, and why I can't buy them in a bundle?

Ralph Splendorio

[Hal—The reasons we don't bundle chips and disks at this time are mostly legal and economic. Page 14, vol 2, number 3 of Portable Paper contains a lengthy explanation. In short, most companies will agree to let us put their software on ROM as a backup service for a small royalty fee or for free. If we were to alter the form of their original packaging, we would invite months of negotiations and lawyers fees (if we could keep such a company's attention in the first place).

Also, since the products we put on ROM have a relatively low retail cost (like Shelp at $49.95; not like Lotus at $495), there is no room for profit if we offered the product on ROM. If we sold SHELP, SideWinder, or even Turbo Pascal on ROM for the same retail price, we would lose quite a bit of money on each sale. Our R&D time and production costs are considerably more than the gross profit from a sale, for example, of Turbo or Shelp.

Finally, if you want to wait long enough, we will probably sell disk and ROM together for a somewhat reduced cost starting sometime in 1988. This will only be after we absorb some of the startup costs for this project—and it is expensive. I make no promises that we will do this. I hope the answer is satisfactory.]

Problems With CompuServe, Nerds, and Computers In General

Thanks, Hal, for your message via CompuServe. My main complaint in this computer world is being confronted with such a mass of ASSUMED terminology. It's mind-boggling to a neophyte mind! For example, who ever heard of "booting up" ?!!! (sigh, grin) I firmly think there should be a series of one-liner books in words of one syllable to get people like me set up in the computer business.

I have been breaking my back typing a HUGE document (MS WORD and LOTUS), and trying to install CompuServe on my Portable Plus. There seems to be a huge problem here, I must say. HP products are surely the top of the line, but I have had an unbelievably ghastly year getting my HP Vectra (on which I have CompuServe here in Florida) in working order. We bought the setup (at a horrendous price) from a dealer who then went out of business! So there I was with NO SUPPORT trying to communicate with a group of nerd types (sorry about the terminology, but the engineer from that dealer was certainly that). I couldn't get anywhere. Finally I hired a software consultant who got me through the woods.

About the Portable Plus—according to HP in California, I seem to have a faulty modem (get that terminology!), and even they don't know what to do about it. They have no turn-in policy if I want to get a new Plus. I've come up with the idea of using a separate Hayes modem on my Vectra. Do you think that would work? I have a sequential port, I think—lots of little "pegs" in a row.

I change my CompuServe handle from time to time—if you see LIBRA, that's me. I tried SUGAR and that opened a can of worms; I then tried GRAMMY... and got dead silence.

Molly Glen, North Palm Beach, Florida

[Hal—Molly, I hope you don't mind me editing and combining several of your CompuServe Electronic Mail pieces you sent me. (Nothing is sacred anymore.) You express the frustrated sentiments of many of our readers. The world of computers is a wonderful, powerful, useful world, but, given the state of the art, it seems we all still must go through an initiation rite.

I hope The Portable Paper *is of some help. I really try to mix the articles so there are some for novices and some for experts, with over half appealing to both camps and to the majority of readers who are somewhere in the middle. I'll appreciate your feedback on the Paper and any products you buy from us. As I mentioned to you on CompuServe, I think other readers will find useful a chronical*

of your triumphs and frustrations with your HP machinery.

In terms of your modem, HP has a one-year guarantee on all its microcomputer equipment. I'm sure if you took your unit to an authorized HP service center, they would be able to help you. Your Hayes modem (or the WorldPort 1200 or 2400 Baud modem we sell) should work fine with your Plus.

To hook up to CompuServe or any other computer via the phone lines, you must run a communications software program on your computer. The Plus has a built-in communication program, called TERM, but it is rather primitive. To do anything besides transferring simple text (ASCII) files (like CompuServe EMAIL), you probably need Reflection—although we discuss other communications software for the Plus in this issue.

Good luck and we look forward to hearing from you and helping you through The Portable Paper.*]*

HP9114 Battery Solutions

When I first got my 110, I almost never had a problem with the 9114A battery running low. This year I encountered this problem much more frequently. At first I thought that maybe I was just running bigger and more disk intensive programs. But the more frequently I ran out of disk power, the more I realized the battery and/or charging circuitry was not what it used to be. I took a chance and bought a new battery and Torx wrench from EduCalc for about $20. WHAT A DIFFERENCE! I can now load RightWriter many times without that old power light giving a flicker.

I also got a "9114 Battery Eliminator" from them for $70. This unit is built by Software, Operations, and Systems Co., and is called an S.O.S. Power Supply. You remove the 9114 battery and plug the cord from the power supply in its place. The unit measures 2.25 × 3.25 × 4 inches. It has a power indicator light, a fuse, but no on/off switch. It seems to work well, but the transformer hums.

Gary Goodman, Fredericksburg, VA

[S.O.S. are the folks that built the Mobile Recharger that recharges your Portable from your car cigarette lighter (see order form in/back of issue). They are sending us a "9114 Battery Eliminator". If it checks out, we will sell it instead of our HP9114 Empowerer since it is less expensive.]

Statistical Package For The Portable

Several months ago, I told you of a statistical package that runs well on my 110, and I promised to send you some more information. My apologies for the long delay.

I am a wildlife biologist and use my HP110 and the statistics software in storing and analyzing data. I am only moderately conversant in statistics and computers, so I can't provide a thorough, expert review.

The software is "Statistix" from NH Analytical Software, 1958 Eldridge West, Roseville, Minnesota 55113, (612) 631-2852. I bought a generic MS-DOS version (1.1) on two 5 1/4" disks which I downloaded to a single 3 1/2" disk. (It just fits.) The software requires 100k of memory on the electronic (A) drive of my HP 9114 disk drive.

Statistix was originally designed for 24- or 25-line screens, but one of the programmers, Gerard Nimis, modified it so it runs on my 16-line Portable screen.

The package is without a doubt the most powerful, complete, and user-friendly software I have encountered. The documentation is thorough, concise (224 pages), and very well organized. Everything in the index is right where you expect it. The manual is well referenced using up-to-date sources. The programs are written in Pascal.

The data- and file-management routines are excellent. You can enter data from the keyboard or import ASCII files. I enter much of my data as ASCII files from dBaseII or Lotus 1-2-3.

Options under Data Management include; append cases, delete cases, edit cases, insert cases, key in new variables, omit/restore cases, purge variables, rename variables, sort cases, transformations, view data, arithmetic expressions, and logical (Boolean) expressions. Under Data Management, the manual also explains precedence, machine precision and test for equality, handling of missing values, and built-in functions.

Goodness of fit and association test include chi-square test, Kolmogorov Smirnov test, log-linear models, McNemar's symmetry test, rank (Spearman) correlation, and two-by-two tables (Fisher exact test).

A suite of linear models includes all subset regressions, discrete (Poisson) regression, eigenvalues—principal components, analysis of variance and covariance, logistic regression, multiple regression, one-way analysis of variance, partial correlation, simple correlation, and variance-covariance.

Another section deals with one-, two-, and multi-sample tests. Included are T tests, sign tests, rank tests, median test, Kruskal-Wallis one-way analysis of variance, and Friedman two-way analysis of variance.

You can calculate probabilities for several probability distributions. Those included are standard normal (Z), T, binomial, Poisson, F, chi-square, correlation, beta, negative binomial, and hypergeometric. You can also examine randomness with a runs test, and test normality with Wilk-Shapiro/Rankit plots.

Summary and descriptive statistics include cross tabulation, mean, standard deviation, median, minimum, maximum, sample size, frequency distribution, histograms, moments, nested break downs, and scatter plots.

So far, I have mostly used the summary and descriptive statistics, chi-square test, T tests, and multiple regressions. They have all been very quick and easy to use.

Perhaps the most amazing thing about the software is its price—only $75! This is a great buy!

Brendan P. Kelly, Fairbanks, Alaska

[Both the price and the features have recently changed. According to Gerald Nimis, a new version which retails for $169 has recently been released. The new version will run on both Portables. It contains a spreadsheet-type editor from which data can be entered, changed, or deleted. There are five new types of time series analysis. Also, new is a summary file procedure that allows you to create a file of summary data (eg means) from a file or raw data. Finally, you can now

(continued on page 43)

THE PORTABLE PAPER

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HP announces new IBM compatible Portable Vectra Computer,

AND REDUCES PRICING OF PORTABLE PLUS PRODUCTS

Hewlett-Packard Introduces Industry-Standard Portable PC Family

The Hewlett-Packard Company introduced on September 1 the first two members of a new family of industry-standard (IBM compatible) portable personal computers.

The HP Portable Vectra CS and the HP Portable Vectra CS Model 20 computers function as a desktop computer with the convenience of a battery-powered portable. Based on an Intel 8086-compatible CMOS microprocessor, they are industry compatible and can be converted into desktop PCs adaptable to external monitors.

"These new PCs are part of HP's overall strategy to provide work stations for all levels of user needs," said Daniel Terpack, general manager of HP's Portable Computer Division.

The Vectra CS is the first battery-powered portable PC to offer four internal I/O expansion slots. Users may add increased memory adapters, communication devices, or peripherals such as printers and plotters—without increasing the size of the computer.

The Vectra CS provides two 1.44Mbyte flexible-disk drives, while the Vectra CS Model 20 PC has a 20Mbyte hard disk and one 1.44Mbyte flexible-disk drive. The high-density, 3 1/2-inch disk drives offer twice the average storage of other portables and are compatible with IBM Personal System/2 disks as well as industry-standard 720Kbyte disks.

Both systems come with a standard 640 Kbytes of user memory. Users can add up to six Mbytes of EMS RAM to the Portable CS, and up to four Mbytes to the hard-disk model.

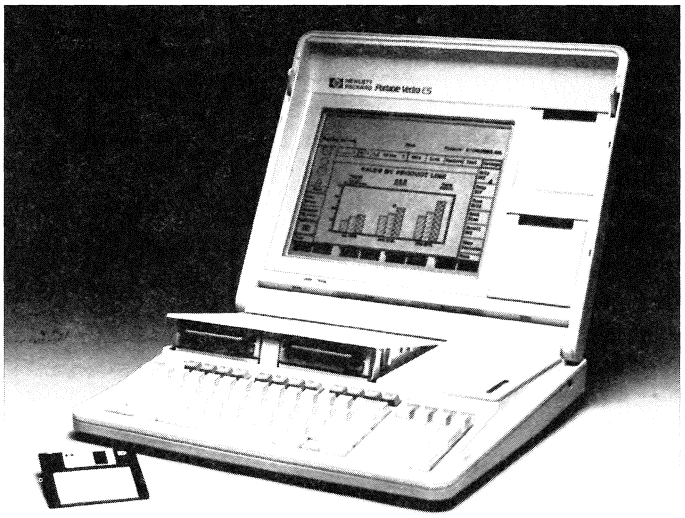
Users can also remove the 12-inch, diagonal, liquid-crystal display (LCD) and connect the system to an external monitor for use as a small-footprint, desktop PC. A standard display/printer adapter can drive either the LCD or an external color or monochrome monitor. The easy-to-read LCD, based on "supertwist" technology for high contrast, offers 640 by 400 resolution and can be adjusted to any angle.

A full-size keyboard, compatible with the IBM PC/AT and PS/2 keyboards, has 92 keys, including 12 function keys and a separate numeric keypad.

A single battery charge runs the Vectra CS for up to 10 hours and the hard-disk model for up to four hours. A battery "fuel" gauge indicates the remaining charge and gives a low-battery warning to allow ample time to back up files.

U.S. LIST PRICES AND DELIVERY

The HP Portable Vectra CS with two flexible-disk drives sells for $2,495. The HP Portable Vectra CS Model 20 PC with one 20Mbyte hard-disk drive and one 1.44Mbyte flexible-disk drive sells for $3,595.



Both systems include 640Kbytes RAM, display/printer adapter, LCD display, full-size keyboard, four I/O slots, 8087 numeric-coprocessor socket, battery model, and recharger.

Options include:

dual-serial EMS adapter with 2Mbyte EMS RAM—$1,795
dual-serial/EMS adapter with 1Mbyte EMS RAM—$995
dual-serial/EMS adapter without EMS RAM—$220
2,400 bps synchronous/asynchronous modem—$695
1,200 bps asynchronous model—$450
HP Vectra DOS 3.2—$95

The Vectra CS is available Sept. 1, 1987. The hard-disk Model 20 should be available in the first quarter of 1988. Both systems may be ordered when available through HP-authorized sales representatives and dealers. Or call 800-367-4772.

HP PORTABLE VECTRA CS PERSONAL COMPUTER
FACT SHEET

FEATURES and DESCRIPTION

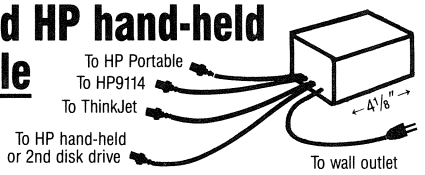
Microprocessor

8086-compatible CMOS 16-bit processor
7.16MHz clock rate
8087 numeric-coprocessor socket

Operating System

HP Vectra DOS 3.2 on 3 1/2-inch disk (optional)
HP extensions: 1.44Mbyte format; 4 COM pots; soft fonts for localized character sets; and HP Personal Applications Manager (PAM)

Power your Portable, ThinkJet, HP9114, and HP hand-held from a single wall outlet.



Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Model 110A Power Cube/Recharger from Summit Concepts.

The Model 110A has five power cords. Four are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.). The fifth is a conventional AC cord that plugs into the wall and powers the other four.

Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with. Order a Model 110A Power Cube/Recharger today.

Model 110A
Power Cube/Recharger $89.95
$84.95 for Portable Paper subscribers.

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Random Access Memory
640Kbyte RAM (standard)
Up to 6Mbytes of EMS RAM can be added to the HP Portable Vectra and 4Mbytes of EMS RAM can be added to the HP Portable Vectra Model 20.
Mass Storage
Two 1.44Mbyte, 3 1/2-inch flexible-disk drives for the HP Portable Vectra.
One 20 Mbyte hard-disk drive and one 1.44Mbyte 3 1/2-inch flexible-disk drive for the HP Portable Vectra Model 20.
No speed specifications are currently available on the hard-disk drive.
Can read and write 720Kbyte or 1.44Mbyte disks
Can read and write both in HP format and IBM PC format.
Display
12-inch diagonal screen
Detachable supertwist LCD
80 characters by 25 lines
640 by 400 test resolution (CGA-compatible)
Continuously adjustable contrast and tilt
Physical Characteristics
16.5 inches wide by 13.9 inches deep by 3.5 inches high (418 mm by 353 mm by 89 mm)
17.6 pounds (8.0 kg) with battery module (standard HP Portable Vectra CS configuration). No information about weight of model 20
Battery Module (standard)
Up to 10 hours use on full charge (HP Portable Vectra CS)
Up to four hours use on full charge (HP Portable Vectra CS Model 20 PC)
Lead/acid battery module with "fuel" gauge
Battery recharger (110/220Vac)
Keyboard
Full-size keyboard, compatible with IBM-enhanced PC keyboard layout
92 keys, including 12 programmable function keys
Separate numeric keypad
LED indicators for CAPS LOCK, SCROLL LOCK and NUM LOCK keys
Full-travel keys
Choice of Adapters
Display/printer adapter (standard). Drives LCD display or external monochrome, CGA or EGA monitor. Centronics-compatible parallel connector for printer interface
Internal modems (optional). 1,200 bits per second asynchronous. 2,400 bits per second synchronous/asynchronous
Dual-serial/EMS adapter (optional). 2Mbyte EMS RAM memory expansion per adapter. Nine-pin (RS-232-C) and 25-pin (RS-232-C and HP-422)
System Clock
Real-time clock/calendar with alarm
Design
Built-in disk holder for six disks
Built-in, retractable handle
Extra shock mounting for disk drives
Battery-powered Printer
HP ThinkJet Personal printer
HP-distributed application software and the HP Portable Vectra CS Family
HP AdvanceLink; Executive MemoMaker; Executive Card Manager; Graphics Gallery Collection; and Lotus (R) 1-2-3 (R)

The HP Vectra Invades Bentley College

Bentley College, the largest undergraduate college of business in New England, has purchased 2,200 HP Portable Vectra CS personal computers for its students and faculty.

Beginning in September, incoming freshmen and sophomores at the Waltham, Mass., institution will use the portables to create spreadsheets for finance courses, solve accounting problems, write papers, and more. Students will be allowed to use the portables in their rooms, at study sessions, and on weekends and vacations.

All full-time faculty members will use either a desktop or a portable Vectra PC to develop and distribute class assignments, prepare lecture notes, and perform research. Because the new portables are compatible with industry standards, professors can make assignments using textbook software without modifying the programs.

What's Special About The Portable Vectra?

by Hal Goldstein

We do not a have an HP Portable Vectra to look at yet. From studying the specification sheet and talking with an HP Corvallis engineer, here are some of my initial impressions about the strengths of the unit.

Imagine a balance scale. On one side of the scale put 17.6 pounds (and a few more pounds if you want the HP Portable Vectra CS Model 20). On the other side look at all the Portable Vectra's features. What follows is a discussion of the most salient of these features. See which way you think the scale tips for your needs.

1. The machine is rugged. The Corvallis designers apparently spent a lot of time making the Portable Vectra as rugged as possible. It was built with extra shock mounting for disk drives. The clamshell, closed-case design means that the system can take some abuse. However, the disk drives are still mechanical—the unit will not be as hardy as an HP110 and Portable Plus with their electronic disk drives.

2. From my understanding the 12-inch, supertwist, LCD diagonal display is the largest display available among comparable products. If you are at your work station, you

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Portable Paper 2 year	99	99	88	81	70	63	52	45
Portable Paper 3 year	139	139	124	114	99	88	73	63
DOS Tools	50	40	36	32	28	26	24	22
And ROM Backup	**179**	**169**	**152**	**135**	**118**	**110**	**101**	**93**
The Editor	100	80	72	64	56	52	48	44
And ROM Backup	**195**	**175**	**157**	**140**	**122**	**114**	**105**	**96**
Norton Utilities	100	90	85	80	74	72	69	67
Norton Advanced	150	129	122	114	107	103	99	96
PrinterTalk/Format110	90	60	63	56	49	45	42	38
RightWriter	95	89	86	82	79	77	75	73
And ROM Backup	**274**	**268**	**252**	**235**	**219**	**211**	**202**	**194**
SHELP	55	50	45	40	35	32	30	27
SideWinder + Utils	80	70	65	61	56	54	52	49
Shelp+SideWinder Disks								
And ROM backup	**230**	**215**	**200**	**185**	**171**	**163**	**156**	**148**
Turbo Pascal	100	90	86	83	79	77	75	73
And ROM Backup	**195**	**185**	**175**	**165**	**154**	**149**	**144**	**139**
T/Master	295	279	261	243	225	216	207	198
Typing Whiz	50	40	36	32	28	26	24	22
And ROM Backup	**145**	**135**	**121**	**108**	**94**	**88**	**81**	**74**
Webster Speller	80	70	66	62	58	56	54	52
And ROM Backup	**259**	**249**	**233**	**217**	**201**	**193**	**185**	**177**
Webster, RightWriter								
And ROM backups	**533**	**517**	**436**	**407**	**378**	**363**	**349**	**334**
Shelp+Format110+Editor								
SideWinder+PrinterTalk								
And SuperROM backup	**474**	**409**	**368**	**327**	**286**	**266**	**245**	**225**
WorldPort 2400 & cable	389	339	328	316	305	299	293	288
2 Megabyte RAM card	2995	2695	2627	2559	2491	2457	2423	2389
1 Meg RAM/8 Socket ROM	1995	1695	1660	1625	1590	1572	1555	1537
Used HP110's	750	750	695	650	595			

HOW TO ORDER

Use the chart at left to determine the discount price. If you do not find the product you want listed on the chart, contact us for discount pricing. Enter the desired quantity on the order form in the back of this issue, or use company purchase order. Cross out the price printed on the order form, and replace it with the price given on this chart.

PRICES GOOD THROUGH DECEMBER 31, 1987

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can detach the LCD screen and attach the Portable Vectra to an external color or monochrome monitor.

3. The keyboard contains full-travel keys; that is, you must press the key all the way down for the keystroke to register. (As a point of reference, both original HP Portable keys sport three-fourth travel.) That should mean a nicer touch for typing, more tolerant of mistakes. The keyboard is full-sized: 92 keys with numeric keypad and 12 function keys. I believe the keyboard is unique in the portable world.

4. Having four IBM PC electronically-compatible slots is also unique in the portable world. (These slots are not size compatible.) The built-in parallel printer port and display adapter uses one slot. However, three more are available for such items as a high speed modem, a serial mouse, or extended memory. I think these open slots will make for interesting possibilities. A non-volatile, electronic RAM card or a card that will accept ROMs certainly seems a possibility given the background and experience of Corvallis engineers.

5. The 1.44 Megabyte (1440K) capacity, 3½ inch, flexible disk drive will certainly be a convenience for HP Portable Vectra users. I am sure HP has had the technology for a long time now. However, this time HP (probably wisely) choose to wait to see what IBM would do. Now that IBM has announced its PS/2 personal computer line with 1.44 Megabyte disks, HP can feel confident it is marching with the industry (rather than ahead of it in its own direction). The built-in disk holder for six disks is also a nice touch.

6. Apparently, the machine zips—about twice as fast as the HP110 and Portable Plus. Fast here refers to CPU speed, not I/O.

USED HP PORTABLES AND PERIPHERALS

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(If you've bought a 1- or 2-megabyte RAM drawer, we'll even buy your old RAM drawer and extra memory!)

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In other words, the Portable Vectra will recalculate a spreadsheet about twice as fast as the already speedy HP Portables. Naturally, it will be much slower then a ROM-based HP Portable in loading an application like Lotus from a disk. However, it will load an application program like RightWriter from disk much faster than an original HP Portable can load the application from the HP9114 external disk drive.

The 8086-compatible, CMOS, 16-bit processor runs at 7.16MHz clock speed with zero wait states. The Norton speed test runs at 3.7 (3.7 times the speed of an IBM PC). However, a Corvallis engineer told me the result might be misleading due to the nature of the Norton test. He told me that a more realistic assessment is that The Portable Vectra runs twice as fast as the IBM XT 2. In certain applications it runs as fast or faster than an IBM AT.

7. The pricing ($2495 for the base dual floppy system and $3595 for the 20 Megabyte Portable Vectra) seems competitive for its class of computer.
8. Physically the unit is very attractive and amazingly slim—briefcase size—for what it contains.
9. The battery is removable. That means users can pull the old HP9114 disk drive trick and recharge one battery while using another. (Naturally, the HP110 and Portable Plus battery life will be much longer than the HP Portable Vectra's since the original Portables do not have to power a mechanical disk drive.)
10. Lest we forget, this member of the Vectra family is a true IBM PC compatible.

HP Makes Strong Price Reductions Of Portable Plus And Accessories

HP announced September 1 that it is reducing the price of its Portable Plus 45711F, 512K base system from $2995 to $2195. The 45711E 512K Plus with internal 1200 baud modem was lowered from $3500 to $2700.

Of considerable interest to current users is the significant price reduction of the 1 Megabyte HP82992 RAM drawer. The price drops from $1695 to $995. The 384K RAM card remains the same: $395 for the 128K drawer and $250 for each additional 128K RAM card.

HP110 and Portable Plus users can now also more easily afford a second disk drive as the HP9114B prices go from $795 to $595.

What does this mean? For a retail price of $3190 a person can buy a Portable Plus with 1.5 Megabytes of RAM disk. He needs to add $500 to get an internal modem and $150 to get the HP82982A software drawer which enables him to purchase and use ROM-based software.

How HP Positions Its Two Portable Families

HP feels that it has two lines of portable computers that suit different needs. HP is positioning the Portable Plus (and HP110) for those professionals who need true portability and durability. HP see the Plus as an ideal tool for those who "spend the majority of their time making sales-and-service calls to customers, but who still need access to information at the main office."

On the other hand the IBM Portable Vectra PC offers true IBM compatibility, flexible- and hard-disk storage, and convenient portability for mobile business professionals, sales and marketing representatives, and students.

Corporate Users:

For discounts on all Personalized Software products, see "Volume Pricing" ad on previous page.

110% Making More of Your HP Portable

by Hal Goldstein

Come Say Hello At Interex, Las Vegas

For the second year in a row we will have a booth at the Interex Conference. Interex is the official international Hewlett Packard users group. This year the show will be held in Las Vegas at Bally's, September 21 through September 25. The vendor portion of the show is free and is held Sept. 22, 9-6; Sept. 23, 12-9; and Sept. 24, 9-5.

Please, come by and meet my wife Rita, me, and our two newest staff members, Larry and Susan Baldozier. Check out our latest products.

For more information contact Interex Las Vegas Conference, 680 Almanor Ave., Sunnyvale, CA 94086, (408) 738-4848.

Come Say Hello At SuperGroup, Washington, D.C.

We have many subscribers concentrated in the Washington, D.C., area. Hopefully, I'll have a chance to meet some of you at The SuperGroup Users Conference East at the Washington Hilton, Washington, D.C., November 2-4. SuperGroup has asked me to speak on "Portable Computing, HP Style". As of this writing I am scheduled to speak Mon., Nov 2 at 11:30. I don't know yet if we will be exhibiting.

For registration information contact The Producers at (617) 683-5622. SuperGroup publishes a magazine for computer users and can be contacted at 801-521-3000.

Expert System on Portable Plus

Bob Pressey of Denver called me a few days ago very excited about a new discovery. After I began to understand the implications of his discovery, I too became excited.

Bob told me that he got Paperback Software's VP-Expert (Berkeley, CA) to work on the Portable Plus. (In a later call he told me the VP-Expert editor, which is one part of VP-Expert, does not work, but it is possible to substitute MemoMaker or your own editor without much loss of capability.)

VP-Expert allows an individual to easily create expert systems. To understand what this means, I will quote from the literature that comes with VP-Expert.

"VP-Expert provides a ready made 'shell' and the tools you need to fill it with a knowledge base and 'rules of thumb'. Then, others—colleagues, staff, clients, customers—can use your system simply by answering the plain English questions you've written. It's that easy.

"For financial analysis, tax planning, legal consultation, engineering problems, medical diagnosis, even wine selecting or gardening ... Any where there is a need for human expertise, there is a convenient productive application for VP Expert."

In other words we could create an expert system based on the Hewlett Packard Portables. We could build a system containing answers to questions about hardware and software that work with The Portables. The system could expand as more information is gathered. As the literature says, "The possibilities are endless," especially if you consider the environment of a portable computer.

Bob Pressey told me to publish his phone number and address. Interested readers can contact him directly at 303-777-0326, 400 South Lafayette, Apt 707, Denver 80209. Bob told me he will write a review for the Paper.

The program comes copy protected and sells for around $100. For an additional $10 you can purchase a non-copy protected version of the software. Bob tells me it requires 256K of internal memory to run and occupies around 360K of external disk space. We will be contacting Paperback software to see if we can sell it directly, without copy protection, on 3 1/2" disk.

Cheap ThinkJet Paper

I got the following information from a dialog between Alan Stein (71246,216) and Steve Broshears (73775,1127) on the HP CompuServe forum.

Elek-Tek is selling TJet paper made by Hammerhill at the VERY attractive price of 5 reams for $33. (Their HP paper costs about $8.50/ream.) For the quality you get on the HP paper by setting BOLD, you can get on the Hammerhill paper with NORMAL. (Do not use bold—it will be too much!) Call 800-621-1269. Elek-Tek offers friendly service and prompt delivery.

Several New Simple Communications Programs For The Portable PLUS

For many Portable Plus users, Reflection, the communications package HP sells on ROM, is a bit of an overkill. The thick manual and two terminal emulators that come with Reflection can be a bit intimidating to users who just want to transfer a few files or download mail from CompuServe. (Next issue we plan to publish an article about getting started on Reflection.)

Two simple alternatives have come to light in the past few months. We will look into putting one or both into ROM.

PPTERM

The first of these programs was developed by CompuServe system operator Mark Horvatich. You can find PPTERM in HP forum Data library 2 (DL2) on CompuServe with full source code in DL9. A help file to download the file itself is located in DL1 and called **dnlpp.hlp**.

PPTERM supports XMODEM file transfers and can be used with the built-in Plus TERM program. We will be including PPTERM on *The Portable Paper* 1988 Subscriber's disk.

Charge your Portable (and HP9114 and ThinkJet) off your car's cigarette lighter!

It's the Mobile Ni-CaD Recharger (MNR-2) from S.O.S., and it couldn't be easier to use: simply plug one end into your car's cigarette lighter and the other into your Portable, Portable Plus, HP9114, or ThinkJet.*

The time it takes to charge a given unit is about 30% longer than with a wall charger. Your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

Mobile Recharger $29.95
(Sorry, we are unable to discount this unit)

*Also works with HP41C/CV/CX, HP71B, and HP75C/D hand-helds: HP82143 and HP82162 printer/plotters; HP82161 cassette drive; and rechargeable reserve battery packs for all these devices.

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PORTTERM

Brian McIlvaine of Groton, Connecticut is still adding the finishing touches to his product PortTerm. Contributing *Portable Paper* editor David Hughes is currently testing the product. He tells me PortTerm is an easy-to-use data communications package. David was surprised by its handy features for such a small package (15K).

According to David, it supports both the serial port and the internal modem, and features XModem upload/download capability, XModem CRC, ASCII downloading, session logging to printer, and a twenty-number telephone dialer. In addition, PortTerm allows you to access ROM-based programs MemoMaker, Lotus 1-2-3, Time Management, and DOS without having to exit and return to DOS. The program should be ready for release during the fourth quarter of this year.

Changing Modes

By Rich Burmeister

Many software products, such as Webster's New World Spelling Checker, the Norton Utilities, and most IBM compatible products that run on The Portables, will not work properly on your Portable or Portable Plus as it is normally configured. You must set the Portable's **Console Mode** (and **Console Font** on the HP110) to **alternate** mode before using these products.

To change from the normal **HP mode** to **Alt mode**, you must enter PAM'S **f6 System Config**. In the menu, move the cursor down and change **console mode** to **Alt**. HP110 users should also change **Console font** to **Alt**. Alas, some software products, such as Lotus 1-2-3, won't work in Alternate mode. They require your machine to be in HP mode. Now you have to go back to System Config to restore HP mode. What a pain!

The following batch file, **newmode.bat**, provides welcome relief. It sets your machine to either **HP** or **Alt** mode. After creating this file, enter **newmode a** to set alternate mode, or **newmode h** to set HP mode.

Before trying to create this file, please note that the letters **esc** represent the escape character. In MemoMaker, it is impossible to correctly create this character. In The Editor, you can press **CTRL [** (the CTRL key and the [key together) to generate an **esc**. From DOS, enter the command **copy con newmode.bat**, then type in the file as listed below (without mistakes). Press **CTRL [** to put an **escape** character in the file **newmode.bat**, and **CTRL-Z** to end entry.

```
echo off
if /%1 = = /h goto HP
if /%1 = = /a goto ALT
echo Use newmode h to set hp mode, or
echo Use newmode a to set alternate mode
goto finis
:HP
echo Setting hp mode
echo ESC&k0\ESC[10m
goto finis
:ALT
echo Setting alternate mode
echo ESC&k1\ESC[11m
:finis
```

To use this batch file, from PAM or DOS type either **newmode a**, **newmode h**, or **newmode** to set **Alt mode**, **HP mode**, or print a help message on the screen, respectively.

We include this file in the *The Portable Paper* 1988 Subscriber's disk, and it comes on The Webster Spelling Checker ROMs.

HOW IT WORKS

(Read on only if you want to see the gory details...) There are four distinct parts to the batch file:

I. The first three lines check whether you entered **newmode h** or **newmode a**, and then jump to the corresponding section (**:HP** or **:ALT**).

II. Lines four to six display a help message if you entered anything other than **h** or **a** after **newmode**.

III. If the program branches to the **:HP** section, line 9 sends the **hp mode** escape sequences to the screen.

IV. If the program branches to the **:ALT** section, line 13 sends the alternate mode escape sequences to the screen.

A TRICK TO DETERMINE WHICH MODE YOU'RE IN

Use the **f3** key from DOS to determine whether you are in **HP** or **Alt** mode. When you press **f3** in **HP mode**, the last DOS command will echo at the DOS prompt. If you are in **Alt mode**, then several meaningless characters will appear on the screen when you press **f3**.

"File Creation Error" Explained

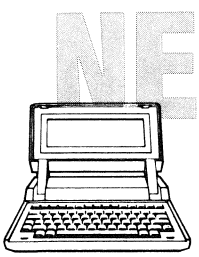
When you're trying to save or copy a file on your A drive, it's possible to get an enigmatic error message synonymous with "File Creation Error". In such a case it is probably NOT time to reformat your system or take your system in for repair. There are several possible reasons.

The most perplexing one is caused by the file limit in your A drive (root) directory. You may have a maximum of 64 files in the A drive main directory. If you try to save or copy a file to a directory with 64 files, you will get the "Can't Create File" message. If you are unaware of this limitation, the message can cause much frustration, since you are sometimes able to save files (after you have deleted a few files) and sometimes not. Users sometimes think there is something wrong with their machine and take it to a repair center.

The solution is to delete files or create subdirectories (see the DOS manual, a book on DOS, or Vol 1 number 2 of *The Portable Paper*).

You will also receive this error message if you try to write to the external disk drive with no disk inserted or try to write to a non-existent subdirectory.

(continued on page 41)



NEWS FROM Personalized Software

Products that make HP Portables smarter

P.O. Box 869, Fairfield, Iowa 52556 515 472-6330

By Hal Goldstein

The Portable Equipment Exchange —New And Used Portable Equipment

The new division of Personalized Software, The Portable Equipment Exchange, is now in full gear. As of this writing, we are finishing up a DAVAR agreement, which means we will be able to sell new HP equipment with HP's blessings. HP is very cautious about whom it lets sell its equipment. They want your HP dealer to be able to give you support on the product you buy. To become an HP dealer requires quite a financial investment and a storefront. For us, given our location and size, becoming an HP dealer is out of the question.

However, HP also has what is called a DAVAR program for third-party vendors like ourselves, who add value to and support HP products. DAVARs arrange to buy products at a discount from a qualified HP dealer and resell it, usually along with the DAVAR's own products. HP must approve every DAVAR agreement.

What does this mean to you? You can purchase all your HP Portable products from one place. When you do, you gain three levels of support: HP, our HP dealer, and ourselves. I trust most of you who have been doing business with us for the past two years realize that we care. We are conscientious, sell our goods at a fair price, and give you personal attention as required. As virtually the sole support of HP Portable computers, we feel we are most qualified to discuss and sell you HP Portable equipment.

We also have been aggressively buying used HP Portable equipment. We believe in the machines and know most of you do too. You may want to upgrade from an HP110 to a Plus, or may need more Portables for your company, or may want to give a family member or associate a valuable gift. All our used equipment is in good-to-excellent condition, and we give you 30 days to check it out. We pick up the shipping costs, and I think you'll find our prices more than reasonable.

If you buy a new or used computer from the Portable Equipment Exchange, you have the option of purchasing many of our products at an even greater discount than normal.

We look forward to using the Portable Equipment Exchange to meet your HP Portable needs, and to expanding our business so we can serve you better.

New Products

NEW PORTABLE WORLDPORT 2400 BAUD MODEM

We are adding the new WorldPort 2400 modem to our price list. It will be ready for shipping in October. For more information, see the review on the WorldPort 1200 in Volume 2, Number 3 of *The Portable Paper*.

The following description of this new modem is an excerpt from a Touchbase Systems press release.

"Touchbase Systems of New York has announced their latest communications product, the WorldPort 2400 Portable Modem. The compact, battery-powered device is both the first and smallest 2400 baud modem designed for both portable and desktop computers. It also provides a unique interface for acoustic coupler operation at both 300 and 1200 baud, allowing use when direct phone line connections are not possible. An external modem, the WorldPort 2400 provides important features for laptop and portable computer users not available with internal modems.

"The combination of many features normally found in popular modems with new, standard ones make it ideally suited for portable use. These new features include: full AT Command Set compatibility, 2400/1200/300 baud operation, auto-dial/auto-answer, pulse and tone dialing, and non-volatile storage of up to 20 commands. Other features which enhance portability include: self-contained battery power, very compact (4"×2.4"×1") size, and unique acoustic coupler interface for 1200 baud operaion. An internal speaker allows audible monitoring of a call, while an LED array provides visual status of call progress, carrier detection, speed, and low battery indication.

"The WorldPort 2400 modem provides dual communications standards for international use. It supports the world-wide standard for 2400 baud, CCITT V.22bis, the U.S.-accepted Bell 103/212A standards for 300 and 1200 baud use, and the internationally recognized CCITT V.21 (300 baud) and V.22 (1200 baud) standards. The Bell and CCITT standards are software selected.

"The modem provides versatility for both portable and desktop applications. In the field, the unit is powered by a single, 9-volt battery, whose life is conserved by an onboard, power management scheme. On the desktop, the unit may be powered with an optional AC adapter, or through the RS-232 port. A standard RJ-ll modular jack is provided for applications where direct telephone connections are available,

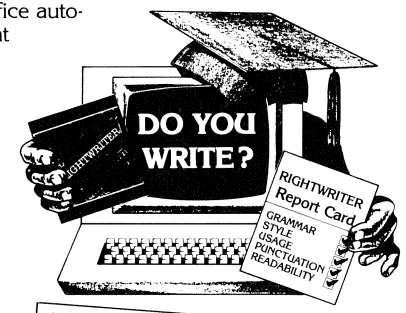
"The acclaimed "Carbon Copy Plus" communications software is included with the WorldPort 2400. (This program will work on an IBM PC but not HP110 or Portable Plus.)"

You can contact Touchbase Systems at (516) 261-0423.

The WorldPort will be ready to ship in October, 1987. It sells for $359.00 ($319 for *The Portable Paper* subscribers—see order form in back of issue.) The 1200 baud to 2400 baud updgrade kit pricing: Retail, $199; Subscriber, $179. 9 Vold AC Adapter: $6.95. Acoustic Coupler (Retail: $59.95, Subscriber: $56.95.)

CONDOR 3

We were just alerted that the HP150 version of this full-featured, relational data base runs on The Portable Plus. The whole package takes less than 360K and has the

NEW! VERSION 2.1
RightWriter®
Now available on ROM Backup for the Portable Plus for an additional $179 (See ROM Backup ad in this issue.)
THE Intelligent Grammar and Style Checker
RightWriter is a new tool to help you produce lean, powerful BUSINESS WRITING. RightWriter uses advanced artificial intelligence technology to flag errors in GRAMMAR, STYLE, USAGE, and PUNCTUATION. RightWriter is the first office automation package aimed at producing better writing, not more writing.
• Messages are Inserted directly into text to point out possible errors and problem areas.
• Easy to Use — only one command to learn, your word processor does the rest.
• Works with Leading Word Processors — including MemoMaker, The Editor, MS Word, WordPerfect, MultiMate, and WordStar.
• Readability Index — measures the reading grade level of the document using the D.O.D. standard Flesch-Kincaid formula.
• Uncommon Word List — lists misspelled, slang, and uncommon words.
• Recommends — never decides. RightWriter is a writing aid. The final decision is always left to you.


"...RightWriter is an idea whose time is long overdue."
Phil Wiswell — PC Magazine
"RightWriter is an excellent, low-cost, eye-opening software package..."
Inside Word Management
"The documentation is among the best I have seen."
Jim Pile, Soft Sector
RightWriter $95.00
$89.00 for Portable Paper subscribers.
RightWords Dictionary Extension for RightWriter.....$29.95
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RECOMMENDED FOR:
HP110 Portable ●
Portable Plus ●
Portable Vectra ●
HP150 ●
IBM PC and compat. ●
Available on ROM Backup for the Portable Plus
RightWriter is a trademark of DecisionWare, Inc., WordStar is a trademark of MicroPro International Corporation. MultiMate is a trademark of MultiMate International. MS Word is a trademark of Microsoft Corporation. WordPerfect is a trademark of WordPerfect Corporation.

reputation of being a fast, easy-to-use, data base package. Retail: $495, Subscriber price $379.

STATISTIX

If you are in need for a strong statistical package on either the HP110 or Portable Plus, then see the letters section in this issue for a brief review by reader Brendan P. Kelly. This product will not be listed anywhere in the ordering information. You'll need to use a blank line on the order form. We will supply the product on an HP formatted 3.5" disk and ship a version that runs on both the HP110 and the Portable Plus. Retail: $169, Subscriber price: $159.

WORDSTAR 4.0

According to our Wizard (see the Wizardry column, this issue) WordStar 4.0 runs fine on the Portable Plus in alternate mode. We will be selling the package with an additional 3 1/2" disk customized for the Portable Plus and ThinkJet printer. This represents a major upgrade of an old classic. Retail: $495, Subscriber: $299.

PERTMASTER DEMO

Here is good news for those who are interested in PertMaster, the full-featured project management package that runs on The Portables. You can purchase the full-blown Pertmaster package with all manuals for only $50. The only catch is that the demo will only allow up to 50 activities. If you like the product and need more activities, then you (or your company) will need to spring for cost of the whole program. The program retails for $695. Subscribers can purchase it for $499. The $50 will be deducted from the cost. Be sure to indicate whether you have a Portable or Portable Plus.

RIGHTWRITER

Popular request and a reduction of program size has won out. RightWriter will just barely fit it on two 128K ROMs, so we decided to go for it. The backup fee for these ROMs will be $179. We expect the ROMs to be available in October.

Upgrades

OUR POLICY—READ THIS FIRST

Our customers actually help "pay" for product enhancements. Unlike many vendors, we don't like to charge for product upgrades and bug fixes, since our users help pioneer the products in the first place. Therefore, as a general rule, unless the upgrade represents a very significant change to the product, we upgrade at no or minimal cost to the user.

Unless otherwise stated, the following is our **normal upgrade policy**.

If you purchased your product from Personalized Software (or can provide proof of purchase), you may upgrade in two different ways. You can send us a formatted disk with a self-addressed, stamped envelope, and we'll put on the upgrade at no cost to you. Or, send us a check for $7.50 and we'll send you the disk. In either case we will include supporting documentation.

T/MASTER DOES IT AGAIN!

By David Hughes

T/Maker Research Company has done it again by adding to their already powerful, integrated software product, T/Master. Selected as a beta tester, I've had the opportunity to spend considerable time with their newest additions: the **chart** and **publishing** modules.

The **chart** command replaces the **bar** command. You can very easily create several different kinds of bar, pie, line, point, and radar charts. You can create these charts in text mode and view them in graphics mode. You can also insert the chart definitions into your file along with the text.

The **print** command has several different enhancements to support desktop publishing, including graphic images, page layout, snaking columns, and "sub pages." The Portable Plus supports both **chart** and **print**. They should be available in September. Current owners will have to contact Personalized Software to check the upgrade policy of this product. The upgrade cost should be minimal.

T/Master—it may be the only program you'll ever need.

And it may be the most "comfortable" program you've ever used!

It may sound strange to call a computer program "comfortable", but that's the best way we've found to describe T/Master. And the other part is true also: T/Master may be the only program you'll ever need.

That's because T/Master has within it virtually every business application you can think of, including word processor, spelling checker, file manager, spreadsheet, database manager, numerical scratchpad, graph making, data communications, desktop publishing, and even more.

There are, of course, other "integrated" programs on the market that combine a number of applications in one. T/Master, however, is the only integrated program that runs on an HP Portable. In terms of capabilities, T/Master also happens to be one of the best. But that isn't what makes it so special.

You see, T/Master isn't just a very good program. It is an entirely *unique* program. It's one you simply must get your hands on before you can appreciate its incredible richness and elegance—and the sheer thoughtfulness that went into its creation.

THE HEART OF THE SYSTEM

As with most integrated programs, T/Master lets you share data between applications—for example, you can insert a spreadsheet into a report you're typing, or can take information from a database and move it into a spreadsheet—all without leaving the program.

However, with most other integrated programs, you have to exit the module you're in (e.g., word processor), load another module (e.g., spreadsheet), work in the second module, then "import" the result back into the first module. In addition, each module presents you with different commands, a different environment, and often a different "feel".

Not so with T/Master.

T/Master doesn't have modules in the usual sense. Instead, *almost everything is done using the word processor*; it's the heart of the system. T/Master's different functions (spreadsheet, database, etc.) are, in effect, *aspects* of the word processor that have special powers. Instead of leaving the word processor to create a spreadsheet that you then have to import, you simply create a spreadsheet (with all the computational power you need) right where you are.

Same for a database. Using virtually the same commands as for typing ordinary text, you can set up the structure of the database, enter data, sort, search, generate a report, and insert that report into your document.

And that's why T/Master is so *comfortable*. You always interact with it in the *same* mode, which is basically just to type. And what you type is ordinary text, or numbers, or simple English-like instructions. With T/Master, you're always on familiar territory.

SPECIAL FEATURES

Here are just a few of T/Master's most special features:

The **word processor** includes over 100 different functions. You activate these either from menus or by means of simple typed commands. On-line help is available at all times. *Highly suitable for desktop publishing*, T/Master's word processor handles text in columns, and lets you view reduced-size layouts of entire pages.

The **spreadsheet** is different from any other. With most spreadsheets, the columns are of a fixed, predetermined width, and the formulas for calculating each "cell" can only be viewed one cell at a time.

With T/Master, *you* specify the column widths and locations, and you type the formulas at the edges of the spreadsheet where you can see them at all times. (Very helpful in getting your spreadsheets to work!)

"No other application that I know of matches the power, thoroughness, and simple elegance of T/Master."

-David Hughes, Contributing Editor, The Portable Paper

Also, unlike other spreadsheets, you can imbed explanatory text anywhere you like—another benefit of T/Master's text-oriented approach to program integration.

T/Master's relational **database manager** competes with database-only products like dBase III. It's easy to select and combine data from two or more files, set up cross-tabulations from data on disk, and generate ad hoc reports.

T/Master's **data communications** capabilities include many you would expect to find in sophisticated stand-alone communications programs. Yet they're easy to use even if you've never done data communications before. (Note: our version of T/Master has its data communications portion customized to the Portable Plus.)

T/Master includes a **"DO" command** that lets you string other commands together and execute them sequentially (in "batch" mode) without intervention.

It is surprisingly simple, for example, to set up a DO command that will perform the following functions at the end of every month: Compile data from selected databases, construct a bar graph, insert the bar graph into a monthly report, and address copies of the report to a selected list of recipients.

When you realize that you can orchestrate all this by means of a single DO command *entirely automatically*, you begin to see the incredible productivity and power that T/Master offers. At only $295 for the entire package (or even less if you're a Portable Paper subscriber), T/Master is easily the best software value available.

HOW COME I HAVEN'T HEARD OF IT?

The T/Maker Company, developer of T/Master, chooses to remain small. They do not advertise, but prefer to let T/Master be known by word of mouth. This has worked well because of the high level of user satisfaction: According to a recent survey, 12 out of every 13 T/Master users "highly prefer" the program over other integrated packages they're familiar with.

T/Master is widely distributed in Europe and the Far East, where it is bundled with IBM PC compatible computer systems.

NOT FOR EVERYONE

T/Master is not for everyone. The T/Maker Company has told us that their most satisfied users are computer-oriented people for whom increased productivity is important (as opposed to casual computer users who might not appreciate the time and effort T/Master can save them, let alone its elegance).

If your computer is an important part of your work life, and if you're willing to learn a new—and much easier—way of functioning, then we urge you to try T/Master for yourself. If, within 60 days, you feel T/Master is not for you, simply return it for a full refund.

But remember, T/Master must be *experienced*. It has a unique way of doing things and a "feel" that's all its own. Order T/Master today. It may change the way you use your computer.

T/Master
(For Portable Plus, Portable Vectra, HP150).....$295.00
$279.95 for Portable Paper subscribers

T/Maker
(HP110 Portable).....$295.00
$199.95 for Portable Paper subscribers

PORTABLE PLUS USERS
You'll need 384K of main memory to run T/Master, plus the following amounts for storage of the various parts: word processor: 123K; speller: 153K; database and spreadsheet combined: 104K; data communications: 33K; chart making: 60K; misc. utilities: 60K. You can, if you wish, run the various parts of T/Master off your external disk drive.

HP110 USERS
T/Maker, an earlier version of T/Master, runs on the HP110 Portable with an external disk drive. The program runs beautifully. T/Maker doesn't support data communications, but it does include word processor, spelling checker, database, spreadsheet, scratchpad, and simple bar charts. It is easily the most comprehensive program available for the HP110.

RECOMMENDED FOR:	
HP110 Portable*	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

60-DAY MONEY BACK GUARANTEE
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THE PORTABLE PASCAL PROGRAMS, REL.2

By Ed Keefe, FastAid Co.

Personalized Software has just released the second edition of the popular Portable Pascal Programs (PPP) disk.

PPP, Release 2, is a double-sided disk containing more than 1.5 Megabytes of Pascal source code and documentation.

Most of this material is contained in seven separate **arc** files. **Arc** files are disk files containing other files that have been compressed by more than 50 percent of their original size. PPP has copies of two programs that make it easy to view these **arc** files and extract individual files. You can then compile and run these extracted files in Turbo Pascal.

The seven arc files hold many of the tips, traps, and techniques of such professional Pascal Programmers as Cliff Looyenga, Paul Grimmer, Ed Keefe, and Kim Kokonnen.

Release 2 contains all the old programs from PPP Release 1. New files from Kim Kokonnen show you how to keep your Pascal "begins and ends" matched up. There is also a file devoted to Pascal programs which have been designed and tested on the HP Plus computer.

The **games.arc** file contains 132K bytes of games, many new to Release 2.

Another file, **readings.arc**, has three articles on the such topics as creating **chain** files, using the command line in Turbo Pascal, and using pointers to break the 64K data barrier. Each article contains small programs to illustrate the topics.

There is also a program that lets you read a 1-2-3 **.wks** file and print out all the formulas and values in it. Another program lets owners of the HP110 turn their computer into a huge, expensive, digital clock.

PPP Release2 is a disk for all Portable Pascal users and programmers. The programs and articles will give you new insights into writing your own programs and inspiration to delve more deeply into Turbo Pascal.

Current PPP owner may update their disk in the normal way.

The retail cost of PPP is $49.95, $44.95 to *The Portable Paper* subscribers. PPP may also be purchased as part of the Turbo Pascal Starter kit that includes Turbo Tutor and Turbo Pascal. (Retail, $189.85; subscriber, $159.95.)

SKETCH 2.12

Sketch 2.12 supports the Logitech Mouse with Portable Plus mouse software. Also, bugs were eliminated from utilities GSPlus and GSFOR. You may upgrade your disk in the normal way.

RIGHTWRITER

The official, new RightWriter 2.1 main program has shrunk by almost 50 percent. The previous release (**right.exe**: 195792 bytes, dated 3-26-87) required 341K of disk space for installed files. The latest release (**right.exe**: 107709 bytes, dated 7-01-87) requires only 250K for installed files. Both releases are labelled version 2.1 since they work exactly the same; none of RightWriter's power is lost in this new release!

(Gary Goodman reports that by using the **sm** (smash) utility from the Personalized Software DOS Tools disk, the original **right.exe** can be shrunk another 2K.)

If you bought RightWriter 2.0 or 2.1 from Personalized Software, you can upgrade in the normal manner.

EDITOR UPDATE

I love it. Thirty minutes before we were to bring this issue to our typesetter, Ed Gilbert, author of The Editor called. He says Portable users can now access the non-U.S. character set (the upper 128 ASCII characters). We had this request from a number of non-U.S. users and have been holding up SuperRom burning in part for this fix. Editor owners can upgrade in the normal manner.

ROM News

By Richard Burmeister

Many of our subscribers have expressed interest in ROM backups for their favorite software. This article describes the latest news about currently available ROM backups.

WEBSTER'S

Webster's NewWorld Spelling Checkers, one of the most popular ROMs, should be shipped by late September. Putting Webster in ROM will cause one minor inconvenience. You will always have to type in the drive letter when specifying the file name. For example, **a:myfile.doc**.

The Webster's ROM had a little extra space on it, so we included several extra files. First, we put the popular **diskpack** program from the 1987 *Portable Paper* subscriber's disk. We also included a batch file, **newmode.bat**. **Newmode** changes your Plus from HP to Alternate mode (and vice-versa) from DOS. Owners of the Webster spelling checker may pay $179 for a pair of 128K ROM backup chips.

RIGHTWRITER

RightWriter will soon be available for owners of RightWriter on a pair of 128K backup ROMs for $179. Putting RightWriter on ROM causes the same minor inconvenience as Webster: You will always have to type in the drive letter when specifying the file name.

SHELP + SIDEWINDER

Since SideWinder and SideWinder Enhance are both written in Turbo Pascal, we were able to include Enhance by compiling both as chain files and using a run file (GO.COM) to execute them. If you don't know what chain files are, don't worry. If you do, then you may make use of GO.COM to run your own Turbo Pascal chain files. Either way, you get Enhance on ROM as a free bonus.

To use SHELP on this ROM, you need to change the line "device=a:\shelp.sys" in config.sys to "device=b:\sw_shelp\shelp.sys". The new Shelp file extract utility **unfnotes** is included.

TYPING WHIZ

The original version of Typing Whiz would not allow you to create your own word lists when run from ROM. We asked the program's author, Jack Bower, to change the program, and he did! Now, you can have the Typing Whiz files on ROM and create your own word lists on the A drive. Or, just use the original test files on ROM.

Erased your files? Get them back with The Norton Utilities!

"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."
By Hal Goldstein, Publisher
The Portable Paper

Version 4.0 and Advanced Edition

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. *But not if you have THE NORTON UTILITIES*!

Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored.* Miraculous as it sounds, in many cases that's all there is to it!

How can a deleted file get unerased?

Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price.* But there's even more to the pachage: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your electronic, floppy, or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem.* Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually, just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to make erasable files unerasable or vice-versa), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet ".WKS" files or by all my text files from a given project).

"Indispensible."
PC Magazine

"Don't compute without it."
The New York Times

"You'll bless this disk."
Peter McWilliams
(The Personal Computer Book)

Personalized Software is authorized to distribute THE NORTON UTILITIES on 3½″ disk customized for users of the HP110 Portable, Portable Plus, and HP150.

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are already a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3 1/2″ disk for users of the HP110 Portable, Portable Plus, and HP150. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5 1/4″ disks sold by Peter Norton for IBM PCs.

We recommend the Advanced Edition of THE NORTON UTILITIES for anyone with a hard disk, or for users who might need to retrieve blocks of text from disks that have become "corrupted" (unreadable by DOS).

THE NORTON UTILITIES are a time-saver for you and a life-saver for your data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.

THE NORTON UTILITIES
DATA RECOVERY
DISK MANAGEMENT

THE NORTON UTILITIES 4.0 . . . . . $99.95
$89.95 for Portable Paper subscribers

THE NORTON UTILITIES ADVANCED EDITION (includes version 4.0) $150
$129 for Portable Paper subscribers

60-DAY MONEY BACK GUARANTEE
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THE EDITOR

The Editor is another very popular ROM backup. Since The Editor requires only about 40K of ROM, we had room to add PRNCONF.COM, which puts your ThinkJet in EPSON (alternate) mode. This allows you to enter much shorter printer codes than those used in HP mode. A batch file sets up the printer, starts The Editor, then puts the printer back in HP mode when you finish editing.

DOS TOOLS

There were not enough orders to justify putting DOS Tools on a 128K ROM. (We have to order 500 128K ROMS at a time.) Therefore, we are putting DOS tools on two 64K ROMs. We will honor the advertised price ($119).

One ROM contains all of the smaller **com** files, such as **pack**, **clean**, etc. The other ROM contains **run.com** and several Turbo Pascal chain files (fcopy.chn, cypher.chn, etc.). This approach allows us to pack more programs on the second ROM.

Since the Plus allocates ROM files in 1024 byte sectors, each file normally requires some multiple of 1024 bytes of disk space. (For example, BEEP.COM, which contains 8 bytes, takes 1024 bytes of disk space.) To save disk space, the small COM files are all contained in **xeq.com**. **xeq** allows you to keep several **com** files in one file (like a library) and to execute each COM file from within the library. (To execute BEEP, for example, just enter **xeq beep**.) Alternatively, individual **com** files may be extracted, copied to the A disk, etc.

After saving so much space, we had room to add a few extra tools: **sm** (SpaceMaker), **translit** (character translator), and **xcopy** (file backup program).

We also included a **help** file that contains the syntax and description of each command.

TURBO PASCAL

As advertised, we included RUN.COM, which lets you execute Turbo Pascal chain files. This also allowed us to add XREF.CHN, Ed Keefe's cross-reference program, which produces a listing of all the words in a file, indexed by line number.

SUPERROM

We're running a little late, but we should be shipping about a month after you receive this issue. SuperRom will feature SideWinder, Shelp, Unfnotes, The Editor, Mini-PrinterTalk, Format110, and Prnconf. We managed to squeeze an awful lot on one 128K ROM. Foreign characters are supported on the SuperRom version of the editor.

HPRINT AND SKETCH

Paul Grimmer of Southern Software, the programs' author, will be burning the ROMs for us. Each program will occupy one 64K EPROM. Knowing Paul, he will make sure that every last byte will be filled with goodies.

Products that Almost Worked

Normally, I don't discuss products that don't work on the HP Portables in *The Portable Paper*. However, the following products came very close to working, or are of great importance to HP users. Perhaps, with your added voice, *The Portable Paper* and its readers can get the manufacturers to make the changes so they run on the Portables.

As most of you know, the HP110 and Portable Plus are "vaguely" IBM compatible with the HP110 significantly less compatible then the Portable Plus. We discuss the compatibility issue in the "Wizadry" column and in past issues—particularly in Vol 1, issues 2 and 3 in The Wizadry column. Basically, the fewer assumptions a piece of software makes about the actual physical computer it runs on, the greater the chance the software will work.

XTREE

Xtree from *Executive Systems, 15300 Ventura Blvd. #305, Sherman Oaks, CA 91403, (818) 990-3457*, has been the favorite "hard disk organizer" of many users and reviewers for many years. It does what PAM and its File Manager attempts to do much more efficiently and visually. It graphically shows the subdirectory structure of a disk and makes it easy to copy, move, delete, rename, print, and display groups of files.

Portable users would find such a program valuable for manipulating files on their electronic disks, especially as the RAM capacity on the Plus grows. Such a program would also be most helpful when using the Portable in conjunction with the external disk drive.

I had reason to be optimistic. CompuServe users in the HP forum had reported that they could make XTree work with the HP150 using the HP150-IBM PC emulator program. Most programs that can be made to work on the HP150 can work at least on the Plus using **Alternate** mode from PAM's **f6 System Config**.

As a further sign of hope, a configuration program that gives an option for a non-IBM system was included with XTree.

To my delight, the opening XTree screen came up on my Plus, displaying my Edisk subdirectory structure, a list of files, and file statistics. However, XTree did not recognize any subsequent keystrokes (such as **m** or **f1**). It did recognize the **Extend Char** as the IBM **Alt** key.

We will be talking to the XTree folks to see if they will modify their program for HP Portable users.

LAPLINK

The rest of the world is discovering what we HP Portable users have known for years. Portable computers are most useful tools and 3 1/2" "hard floppy" disks are superior to 5 1/4" disks.

Now new portable users are faced with the problem that has plagued us from the beginning: transferring data from 5 1/4" disk to 3 1/2" disk.

The HP solution has been to purchase an HP-IL card and software (HP45643A) that fits into an IBM PC or compatible. This solution works very well. Users just connect the two computers with the thin, black HP-IL cables and then use the normal PAM **File Manager** or DOS **Copy** to transfer files between the Portable and IBM PC.

The one snag in this system is that whenever you want to transfer data to an IBM PC or Vectra, that PC requires an HPLink card. Finding such configured PC's in one's travels is unlikely.

Alternatively, you can use phone lines or a serial connection to transfer files between HP Portables and PCs. In either case, communications software (such as Terminal on

The Word Plus
A great spelling checker—and more!

Recommended for the HP110 Portable

HP110 Portable users:

There are several reasons why THE WORD PLUS is your best bet in a spelling checker.

First of all, THE WORD PLUS fits into your machine! Its dictionary has 45,000 words, but you can use a 35,000 word dictionary instead; this saves 30K of memory space. On the HP110, this leaves 40K for your document. The full dictionary and main spelling program take up about 165K.

Second, THE WORD PLUS comes with a carload of useful features. In fact, it offers most of the same word-replacement features as Webster's, a top-rated spelling checker that runs on the Plus (see ad in this issue). What's more, THE WORD PLUS even does some things Webster's can't do. For example:

- It can find all the words with a given prefix or suffix—or even find words that rhyme.
- It can do a global *search and replace on multiple words in a single pass.*
- Additional utilities within THE WORD PLUS will count the *frequency* of each word in a file, and alphabetize the words in a file automatically.

If you've ever worried about spelling errors or embarrassing "typos," worry no longer. Order THE WORD PLUS. It's fast, it's friendly, and it *never* forgets a spelling.

THE WORD PLUS . . . . . $150.
$129 for Portable Paper subscribers

Special price $99.95

"Of all the spelling checkers I've used, I like The Word Plus best. . ."
—Jerry Pournelle
Author of "Chaos Manor" column
Byte Magazine.

THE WORD PLUS works with MemoMaker, The Editor, and other word processors that can produce ASCII files.

Our version of THE WORD PLUS includes a 3.5" disk and simple instructions for customizing the program to the HP Portables.

RUNS ON:			
HP Portable	●	HP150	●
Portable Plus	●	IBM PC / HP Vectra	●

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Portable Plus and HP 150 users: Also see ad for WEBSTER'S SPELLING CHECKER in this issue.

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the HP110 or Reflection on the Portable must be run on both ends. You can make the serial connection by using the standard HP printer cable HP9222IP. (See Vol I, issue 6, page x of *The Portable Paper.*)

Now that transferring files to and from Portables has become big business, another approach has emerged. Software and cabling has been designed specifically for fast, simple-to-use transfer between Portables and PCs. According to many independent reviews, the fastest and simplest is Traveling Software's LapLink.

Unfortunately, all such packages we have found assume the Portable serial port is IBM compatible. Neither the HP110 nor the HP Portable Plus's serial port is IBM PC compatible. Consequently, LapLink and all the other commercial data transfer packages I have discovered thus far, including The Brooklyn Bridge, do not work.

I phoned Mark Eppley, president of Traveling Software and sent him relevant portions of The Portable Plus technical manual. After looking the portions over, he said "no go"—it would require too much of an engineering effort to get LapLink to work on either machine.

But there is hope.

On the CompuServe HP forum, Jim Scheef (76137,757) reported that Platt River Software in Denver, Co., is working on porting their file transfer product, Duette, to the Portable Plus. Duette is a product like LapLink that transfers files at up to 115,000 baud, but unlike Traveling Software, Platt River is interested in serving the PPlus market. Hopefully we'll see a Portable Plus version in a few weeks.

We will certainly keep you posted and distribute any decent product that becomes available. If nothing becomes available, we'll rig up a cable with simple communications software for the PC, the HP110, and Portable Plus. We'll make it as simple to use as possible, but the file transfer will be much slower than commercial products.

GO

When I was younger, I used to love playing the ancient Japanese game of Go. (No time now. I'm too busy writing *The Portable Paper* and finding products that work on the Portables.) The rules are actually simpler than chess, but the strategy is more complex. Two players take turns placing stones on a 19 by 19 board and try to surround each other.

In an Artificial Intelligence class, I learned that Go was too complex to simulate on any computer in the near future. The future came quickly. Crystalline Creations, Inc., 34 Oak St., Lexington, MA 02173 (617) 863-1454 produces Go software that apparently plays an excellent game. It retails for $139.

I talked to the program's author, Bruce Wilcox, about running Go from the Portables. The program was written for a 25-line screen, so that eliminates the HP110. However, my hopes soared for the Portable Plus when he said he made no assumption about the machine's hardware—it was written for a generic DOS machine.

I received the game, started it, and up came questions about options. Eventually, the board showed up, and I thought I was in business. The program even accepted my keystrokes for moves. However, when I moved, the board did not show either opponents' plays. When I ran the game on our Compaq, little funny faces appeared for the stones. These faces are part of the IBM character set that can you can usually generate by typing **CTRL a** and **CTRL b**. Unfortunately, these characters (although they are built into the Plus) do not show up properly on the Plus. I will talk to Bruce when he returns from vacation about the possibility of a simple fix.

GOTOLESS CONVERSIONS

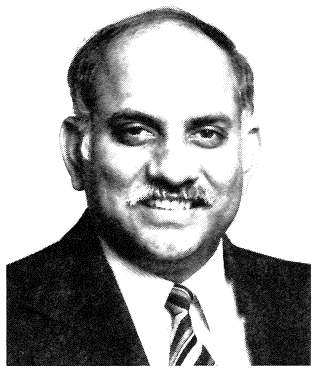
GotoLess Conversions, PO Box 500068, Denton, Tx 76206, (214) 221 0383, makes a product that translates BASIC programs to Pascal. Many HP Portable users would love not having to carry the BASIC interpreter with them when they run BASIC programs. To make a long story short, the product translates BASIC into Turbo Pascal routines that use IBM PC features (that do not work on The Portables).

·PORTABLE· PROFILES

Let us profile your or your company's use of the Portable. Tell us about your interesting or unusual application of The Portable. Or share a description of how you use The Portable: let other readers benefit from your experience. Give us a call (ask for Hal), or send us a draft on paper, disk, or via CompuServe. (Personalized Software, P.O. Box 869, Fairfield, IA 52256, 515-472-6330).

Seven Uses For The Portable Plus

The author, Srini Nagoshwar, is the Value Added Channels Marketing Manager at Hewlett Packard. He is responsible for marketing HP products, including PCs and peripherals, through worldwide dealer channels.



Srini Nagoshwar

I began using an early prototype of the HP110 in February 1984, three months before we placed it on the market. I wanted to understand from first-hand experience how our customers, who are often managers like myself, would use it.

Today, the Portable Plus is deeply woven into everything I do as a manager. In fact, I am completely hooked; I could not function without it. The Portable Plus has proven invaluable for:

1. Communications
2. Correspondence
3. Travel expense reporting
4. Performance evaluations
5. Time and calendar management
6. Address book management
7. Slide presentations

1. COMMUNICATIONS

Electronic Mail

I first used the Portable primarily for electronic mail. All of us at HP are on the "HP desk system." HP has close to 42,000 employees worldwide connected to each other by the HP3000. I can send and receive messages to and from any of these employees. This particular network is a crucial element in our internal communications strategy.

There was one big problem with this system, however. I received so many messages, I had to work late just to read them. I wouldn't get home until 7 or 8 p.m. To solve this problem, I started accessing my HP mail from home at my own convenience via the Portable. Normally this procedure would be very time-consuming because of our complex security system. But I wrote an auto-log command file that lets me easily access the HP disk and my in-tray. I discovered I could answer my messages with more timeliness and friendliness. I could also provide input and send comments—even thank you messages. As a result, I became a much more valuable member of the team.

Airline Reservations

I also used the Portable to schedule low-fare airline trips by accessing the Official Air Line Guide available through CompuServe. I would tell my secretary the flights and fares I had chosen and she would make the reservations immediately. On some flights I saved $300 on a $700 ticket. The Portable paid for itself in just three or four trips.

Computer Technology—Increased Efficiency

One objective in using the Portable is to generate additional free time for business and personal use. This is part of a strategy to take advantage of computer technology, to really form a team with my secretary to increase efficiency and productivity. My secretary has an HP150 Touchscreen 2, a LaserJet, and a 7550 plotter. I also have a 150 and a ThinkJet. I use an HP-IL card in my 150 to allow it to back up my Portable, transfer files, and more. For software, we use Lotus 1-2-3, Executive MemoMaker, Executive Card Manager, and Graphics Gallery. A communications package like Advance Link connects to our HP Mail.

On the road I carry a Portable Plus with 896K of memory. At home I have a ThinkJet, an HP9114, and an external 2400 baud modem. The software programs I use on my Portable Plus are Lotus 1-2-3, Time Manager, MemoMaker, Executive Card Manager, BASIC, and the old PC2622. I also interfaced an old hard disk (with the old amego protocol) to my Portable Plus at home via an HP-IL converter.

Portable Travel

My travel habits have changed a bit since I've had the Portable. In the past, when I checked into a hotel, I would check how comfortable the bed was, how well the TV worked, etc. Now the first thing I do is see if I can plug my Portable Plus into the telephone jack.

Whenever I travel I typically use the hour or so at the end of the day to log onto our computer back in California. I read my mail and a file called "news of the day," which my secretary updates daily to keep me informed. I then leave messages and instructions for her. I can keep track of projects, and nudge people or things a little bit. (I have to be careful not to do this too much!) I have also installed a separate, unlisted telephone line which I use exclusively for the Portable. This prevents any interruptions you often have on a two-party line.

In many newer hotels I can unplug the phone and plug in a 2400 baud modem. The external modem is faster than a built-in modem and provides better control and feedback.

There have been times when I could not unplug the phone. In many of these hotel rooms, people have cut the lip off the connector so you can't pull it out. The first time I encountered this situation, I called room service, and used one of the prongs on a fork to pry the connector out. Now I carry a little communications kit with a screw driver.

Sometimes the connector is hard-wired. I have a Radio Shack cable with a modular jack on one end and bare wires on the other. I unscrew the wall plate and connect the bare wires to it. I can then use the modular jack. Of course, I only do this if I am at a place for three or four days. It's really not worth it if I am just there for one night.

Great portable modem for your HP portable

The 4″×2″×1″ WorldPort 2400 costs less than HP's internal modems, is faster, and can be used with more than one computer.

Data communications at 2400 baud—in a 6½ ounce package!

If you do data comunications with an HP Portable or Portable Plus, you've probably found the internal 300- or 1200-baud modem to be too slow. Until now, the only solution was to buy a bulky external modem and lug it around wherever you go.

A better solution is the Worldport 2400. It measures a trim 4″×2″×1″, it's rugged, it weighs only 6½ ounces including the battery, and it sends and receives at 300, 1200, and 2400 baud.

A MYRIAD OF FEATURES

The Worldport 2400 has a wealth of features you would expect to find in a desktop modem several times its size.

EXTRA BONUS FOR USERS OF THE IBM PC AND NEW HP PORTABLE VECTRA

Included with the WorldPort 2400 at no charge is the acclaimed communications and remote control software package, Carbon Copy PLUS (retail value: $195). The program also comes free with the WorldPort1200—WorldPort2400 Upgrade Kit. (Carbon Copy PLUS will not run on the HP110 or Portable Plus, but both WorldPort modems will run with HP's communications software, namely the Terminal program for the HP110, and TERM and Reflection for the Portable Plus.)

For example, the WorldPort 2400 has auto-dial, auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers nonvolatile storage of up to 20 commands. And it is fully compatible with the industry-standard Hayes AT Command Set, and with the HP110's Terminal software and the Portable Plus's TERM and Reflection software.

Since a modular plug is not always available, the WorldPort 2400 also has a built-in interface for an acoustic coupler. (The coupler, an optional extra, runs at 300 and 1200 baud.) The unit is compatible with both the internationally accepted CCITT communications standards and the Bell communications standards recognized in the U.S..

The WorldPort 2400 uses a standard 9-volt transistor radio battery (it's included with the unit). A fresh battery will keep the WorldPort humming for 8-10 hours. You can extend battery life by operating the unit from a wall outlet whenever possible, using the optional AC adapter. The WorldPort 2400 draws no power from your Portable's battery.

DOUBLE GUARANTEE

In addition to our standard 60-day money-back guarantee, the WorldPort 2400 comes with a 2-year manufacturer's warranty covering defects in materials and workmanship.

The WorldPort 2400 offers portablility, reliability, well-designed features, and ease of use. Order yours, risk-free, today.

	Retail Price	Subscriber Price
WorldPort 2400 modem (with Carbon Copy PLUS software)	**$359.00**	**$319.00**
WorldPort 1200 modem (without software)	**199.00**	**179.00**
Cable to connect modem to HP Portables	**35.95**	**19.95**
Acoustic coupler (300/1200 baud)	**59.95**	**56.95**
9-volt AC adapter	**6.95**	**6.95**
Upgrade kit: WorldPort1200—WorldPort2400 (includes Carbon Copy PLUS software)	**199.00**	**179.00**

RECOMMENDED FOR:			
HP110 Portable	•	Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•

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WorldPort 2400 and WorldPort 1200 are trademarks of Touchbase Systems, Inc. Hayes is a trademark of Hayes Microcomputer Products, Inc. Carbon Copy PLUS is a trademark of Meridian Technology, Inc.

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One program I accessed from the CompuServe HP Forum allows me to modify a Radio Shack 12 volt, 2½ amp power supply to power the 9114. You can essentially unplug the battery from the 9114 and substitute it an AC line power. Now I no longer have any 9114 power problems.

2. CORRESPONDENCE

As a manager I don't need a phenomenal word processing package like WordPerfect, Wordstar, or MS Word. Since my memos are typically one to two pages, MemoMaker works absolutely fine.

My objective is to work on memos without having to "reset to zero" every time due to various interruptions. I also don't want to be tied to my desk. I want to be able to write memos at airport departure lounges, hotel rooms, or anywhere.

I can be working on a memo, stop, close up the Portable (it will shut itself off), go somewhere else, open the Portable, hit a key, and return to exactly where I was. I don't have to fool around with reloading disks, restarting, and sorting through files.

I now compose most of my correspondence and memos on a Portable. I use my HP-IL link to the 150, put the file on a disk, and give it to my secretary. About a year ago I had a secretary who was an expert in WordStar. She took my memos, edited them, and printed them on a Laser Jet. My current secretary uses Executive MemoMaker; my MemoMaker files interface with her 150 very nicely.

A second technique I use, especially on the road, is to upload the memo through HP disk into our 3000 and then send it to my secretary via HP disk. She can then download it, compose the memo, and have it ready for my signature when I come into work. This procedure is very efficient. It has also helped me become a more friendly person. I generate more correspondence, especially the kind (like Thank You notes, etc.) that makes the difference between being a normal person and a nice person.

3. TRAVEL EXPENSE REPORTING

Reporting travel expenses can be a problem, especially if you travel frequently or take longer trips. It is often difficult to keep track of the money you spend. There have been times, frankly, when I have paid for things out of my own pocket since I couldn't reconstruct some expenses.

Now I use a spreadsheet like Lotus 1-2-3 on the Portable. At HP our travel expense reports fit very nicely into a spreadsheet. We have generated two expense report templates. One is for domestic travel and the other is for international travel.

When I travel in the United States, I record my expenses in my Portable as I go along and complete them when I come home. I print a copy on my ThinkJet, sign it, and store the report on disk for future reference. Within a few minutes, I am finished. When I travel internationally, I use a spreadsheet template to record all the numbers of my traveler's checks in case I lose them. I record all traveler's check transactions with local currencies. Lotus 1-2-3 then performs all the currency conversions. This makes things very easy for me.

A second spread sheet template generates an international travel expense report. On a typical European trip you could travel to seven or eight countries in about two weeks. The wonderful thing about the Lotus spread sheet is that you can enter your local currency and exchange rate once, and then enter all your expenses in local currency. Lotus will automatically convert your expenses to dollars. This may not be a very sophisticated application of Lotus, but it is a very effective one.

Before I began using the Portable, constructing an international travel expense report was a nightmare, a thankless two- or three-week job. Now I am back from Europe on a Sunday night and submit my travel expense report to accounting on Monday morning. My secretary has nothing to do with it. It's perfect, it's accurate, it's clean.

4. PERFORMANCE EVALUATIONS

As a manager at HP, I regularly conduct performance evaluations and development reviews of my people. My secretary created MemoMaker templates with all the forms for the different job categories. I store these forms in a subdirectory on my portable. I use much of my free time at home or on a plane to really work on these evaluations. I can reflect very deeply on each one.

Later I print the reports and sit down with each individual. At the end of our meeting my employees are encouraged to make comments. Since the evaluation is on my portable, they can type their comments right into it. I then use the HPIL Link to transfer them onto a disk which I give to my secretary to print. Within minutes I submit the completed evaluation to Personnel.

5. TIME AND CALENDAR MANAGEMENT

My calendar management strategy is quite simple. I use Time Manager on the Portable as a complement to my master calendar and diary function on the HP 3000. Since Time Manager files and the HP disk files are not compatible, I wrote a program and linked it to a batch file. I then created a function called "calendar update" on my Portable which allows me to log into the HP 3000. (It uses the same command file I use for the auto-log on HP disk.) Using the calendar function, I can download 90 days worth of calendar data from HP disk directly in the Portable Plus. After that I call up a Basic program I wrote on the Portable Plus. This program looks at the downloaded calendar file from the HP3000 and places the files in Time Manager.

To keep things orderly, my secretary is the only one who makes entries into my calendar. I run the calendar update program daily. One nice benefit of the HP desk function is that anyone in my department can find out when I am free, thus saving valuable time.

I also downloaded from CompuServe a program called DM Swap which allows you to have two "To Do" files: a personal "To Do" file and a work "To Do" file. From Time Manager I run DM Swap to swap the To Do files. One interesting thing about this is that my work Things To Do changes all the time, but my personal Things To Do just keeps expanding because I never get to them. But with the To Do, Time Manager, and HP Disk, I have greatly improved the management of my time.

6. ADDRESS BOOK MANAGEMENT

My objective here is to keep track of all my friends, business associates, customers, and acquaintances without having to transport a Rolodex with me. Executive Card Manager (ECM) comes to the rescue. I run the ECM on the Portable and on my 150. When I have time, I enter any new calling cards into my ECM. Regardless of when and where I travel, the ECM files are always with me. This has saved me considerable amounts of time. I create a backup on a subdirectory on a 150 hard disk, using the HP-IL link.

7. SLIDE PRESENTATIONS

I can generate slides for plotters and overhead projectors using the Portable. I enter my data into a Lotus spreadsheet and create a graph, which I save as part of the spreadsheet. A program called "The Worksheet Connection," which runs on the 150, takes the spreadsheet data and converts the graph into a Graphics Gallery-compatible file. My secretary, who has a plotter on her system, then runs Graphics Gallery to generate bar charts, pie charts, line charts, and more. I can do all this easily at my own convenience.

One thing I have not yet been able to do is generate text slides using the MemoMaker package (i.e., take a MemoMaker file, put it into Graphics Gallery, and then dump it out as a MemoMaker File.) Today the capabilities on Gallery allow you to take a picture file, put it into MemoMaker, merge text and graphics, and print it. But you can't go the other way. I have been told by our software friends that they are in the process of making this possible. Once they have it, I will be able to generate text slides on MemoMaker and put a whole presentation together. I can then transfer those files to my secretary so she can just plot it out on her 7550, clean it up, add colors, etc.

ANSWERS TO SOME QUESTIONS
I AM COMMONLY ASKED

Where is HP headed in the portable market?

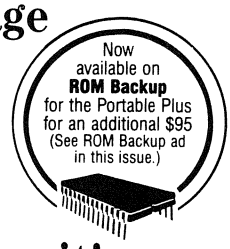
It's very clear there are two branches to the portable market. The first branch is what I call the "electronic briefcase market." The second branch is the desktop PC replacement market. The first branch uses the Portable the way I do. I try to have everything normally in my briefcase on the Portable and use just a very thin briefcase for papers. The second branch uses the Portable to do everything a desktop PC can do. Of course, it is extremely crucial to have PC compatibility to read all the software. (In fact it is probably not even that important to have PC hardware compatibility.) The recent introduction of the HP Portable Vectra family satisfies the many requests to enter this second market.

Will HP increase the amount of ROM software?

Rick Baker and his people at Corvallis are working to increase the EDisk type memory that goes into the Portable. They just announced a 1 megabyte memory drawer so you can take the software and put it into RAM. They are also

Whether you want to learn programming or you're a seasoned programmer, the best programming language for your HP Portable or Portable Plus is

Turbo Pascal



—and our Turbo Pascal Starter Kit is the best way to buy it!

Here's why.

The Pascal programming language was originally designed for use at the college level in teaching the fundamentals of computer programming. Borland International enhanced the language, making it practical for actual programming use. Their version is called Turbo Pascal.

Today, Turbo Pascal is the programming language taught at most universities. The reason is that its underlying structure fosters good programming habits. It forces you to think in a modular way: You create self-contained, well-defined units and put them together to make a full working program.

GREAT WORKING ENVIRONMENT

Turbo provides you with an exceptionally good programmer's environment.

One aspect of this is Turbo's built-in text editor. It's a sophisticated WordStar work-alike that in itself is worth the price of the program.

Another aspect is Turbo's compiler*. In addition to being uncommonly fast (an amazing 80-100 lines per second), it is also uncommonly helpful: If the compiler encounters a mistake in a program, it stops compiling, gives you an error message, returns you to the editor, and takes you to the place in your program where the error occured.

The *external* environment for Turbo is also excellent: There are numerous books, articles, public domain programs, and even a CompuServe forum devoted to helping people use Turbo to full advantage.

With all these advantages and more, it's no wonder that Turbo Pascal is today's best-selling programming language for the IBM PC.

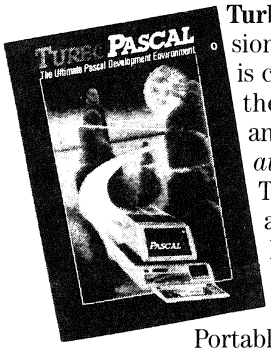
THREE-PIECE STARTER KIT CUSTOMIZED FOR THE PORTABLES

For Portable and Portable Plus users, there's yet another enormous benefit: *Turbo Pascal takes up less than 40K of memory*—and that includes its powerful built-in text editor.

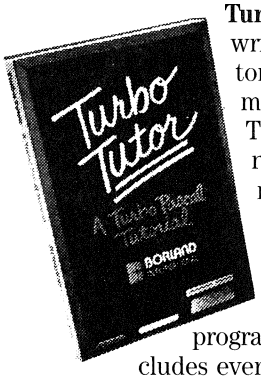
We are now offering Turbo Pascal in a special 3½″ disk version for your Portable or Portable Plus, ready to install from PAM.

Although you may purchase Turbo all by itself, we recommend our **Turbo Pascal Starter Kit.** It's ideal for novice and intermediate programmers alike.

The Starter Kit inludes **Turbo Pascal,** Borland's **Turbo Tutor,** and our own special disk, **Turbo Pascal Programs for the Portables.** Here's a rundown on each:

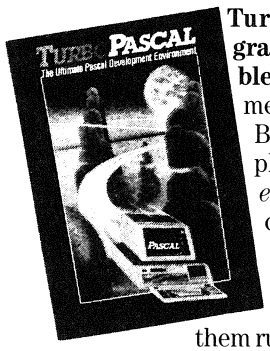


Turbo Pascal: Our version of Turbo Pascal is customized to both the HP110 Portable and the Portable Plus *at no extra charge.* The customization, authorized by Borland, allows the Turbo editor to use all the normal Portable editing keys (Extend Char—Delete Line, etc.). This saves you from having to learn many of the commands particular to WordStar.



Turbo Tutor is a well-written, interactive tutorial that includes a manual and a disk. The manual covers not just the fundamentals, but many fine points of Pascal programming as well; it is of value even to advanced programmers. The disk includes every example covered in the manual, already keyed in and ready to use. (Note: neither the IBM version nor the HP150 version of Turbo Tutor will run on the Portables; only our 3½″ disk version will.)

RECOMMENDED FOR:			
HP110 Portable	•	Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•



Turbo Pascal Programs for the Portables is a great supplement to Turbo Tutor. Based on the principle of *learning by example,* the disk contains more than 50 sample Turbo Pascal programs, and every one of them runs on the HP110 or the Portable Plus. The programs range in length from ten lines of code to hundreds, and from simple (temperature conversion, games, arithmetic) to advanced (input/output, graphics, and more). Every program is included on the disk so you don't have to key in any of them—they're ready to run or to be incorporated into your own larger Pascal programs.

If you're into—or getting into—the highly productive world of programming, our Turbo Pascal Starter Kit will help you become an expert. Order your copy of this dynamite programming package at no risk today.

Portable Paper Subscribers:
The Turbo Pascal Starter Kit saves you $30 off the price of the three products purchased separately.

	Retail price	*Subscriber price*
Turbo Pascal Starter Kit (includes Turbo Pascal, Turbo Tutor, Turbo Pascal Programs for the Portables)	**$189.85**	**159.95**
Turbo Pascal	**99.95**	**89.95**
Turbo Tutor	**39.95**	**35.95**
Pascal Programs for the Portables	**49.95**	**44.95**
Turbo Pascal on ROM Backup for the Portable Plus**	**95.00**	**95.00**

**ROM Backup version includes RUN.COM, a utility program that can save 10K of disk space from any program you compile with Turbo. Note: *You must own (or order) the disk version of Turbo in order to purchase the ROM Backup version.* See ROM Backup ad in this issue for details.

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Compiling a program means getting it to meet the rules of syntax imposed by the programming language. A program will not run until it can be compiled.

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working to make it possible for people to burn their own ROMs.

Will original HP 110 portable users be able to upgrade their screen RAM and ROM?

I know many people have asked about whether they could upgrade screens. But, given the way the machine was built, this is very difficult, if not impossible. Obviously the best upgrade is to acquire a Portable Plus. It is more expensive, but, unfortunately, the 110 is a closed machine and was not designed with RAM and ROM drawers.

SPECIAL FEATURE:

Add-on Products for Your Word Processor

The most natural urge in life is to expand, to want more. MemoMaker users are generally satisfied with their simple ROM-based word processor. MemoMaker users can type memos or simple reports without much effort and with little to learn. Some MemoMaker users now use The Editor. The Editor also takes little time to learn and use, sports many more editing features than MemoMaker, and requires only 40K of RAM space or one ROM socket.

However, there are many things MemoMaker and The Editor cannot do that come standard with full-featured word processors. In this series of reviews we discuss products that add value to MemoMaker and The Editor and even to the more full-featured word processors, such as MSWord, that run on The Portables. First, we will discuss all eight spelling checkers available for the HP110 or Portable Plus. Then we examine a grammar and style checker that runs on both machines and works with all HP Portable word processors. Finally, we look at four text enhancement programs. These programs significantly enhance the look of your word processing documents.

Spelling Checkers And The Portables

By Edward Goldfinger and David Hughes

A computer program that checks your spelling is a godsend to anyone who has trouble spelling accurately. (Some of the best of us are in this boat!) But it also can save time and effort for the good speller. Even a good speller can make errors in typing, and a spelling checker program can find those errors in a fraction of the time it would take to proofread a document by eye.

Some spelling checkers merely tell you which words you've misspelled, leaving it to you to supply the correct spellings. As we'll see, others practically brush your teeth for you.

There are two categories of spelling checkers of interest to HP110 and Portable Plus users. The first category—covered in the first part of this article—are stand-alone spelling checkers. These work with any ASCII text such as produced directly by Hewlett Packard's MemoMaker and Personalized Software's The Editor. The second class of spelling checkers come as part of (or as an add-on to) a word processor. Word processors that have spelling checkers include MSWord, WordPerfect, Multimate, WordStar, T/Maker, and T/Master.

There are three stand-alone spelling checkers on the market that should be of interest to Portable users: The Speller (Hayden Software), Webster's Spelling Checker (Simon & Schuster), and The Word Plus (Oasis Systems). All three work on the HP150. Webster's and The Word Plus work on the Portable Plus; The Speller and The Word Plus work on the HP110.

We'll first describe what is common to all three programs. Then we will briefly describe each of them. We'll conclude by comparing the three, using a variety of criteria that we feel are important in deciding which one to use. In the second part of this article, we'll briefly discuss the word processors with built-in spelling checkers.

COMMON CHARACTERISTICS

All three stand-alone spelling checkers work with ASCII (print) files produced directly by MemoMaker, The Editor, T/Maker, and T/Master, and indirectly by MS Word, WordPerfect, and other word processors. (If these stand-alone spelling checkers are used with ASCII files produced by MSWord or WordPerfect, formatting is lost.)

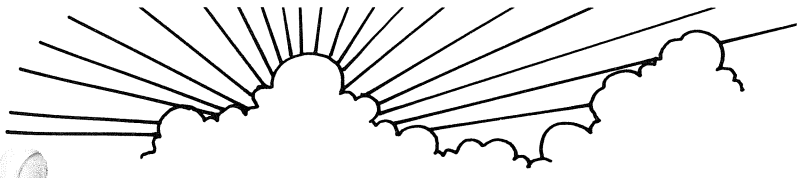
All three spelling checkers will search through a user-specified document file and locate "suspect" words—that is, words not in the program's built-in dictionary. And all three let you view suspect words in context, as they appear in your document. (Naturally, not all suspect words are misspellings. People's last names, for example, are not likely to be in a spelling checker's built-in dictionary, and they would be flagged as suspect even if spelled correctly. It's up to the user to decide which of the suspect words to leave as is.)

Each of the three products allows you to replace suspect words with their correct spellings "globally"—in other words, you can replace all occurrences of the suspect word at once. You can also add words to your own auxiliary dictionary of frequently used terms. All three products will count and display the total number of words in your document, and all three have some provision for handling "soft hyphens." (Soft hyphens are a feature of WordStar and many other word processors.)

Finally, all three spelling checkers automatically create a backup file with the extension **.bak** in which the original, uncorrected version of your document is saved. This, of course, takes up extra disk space.

HAYDEN'S SPELLER

The Speller, by Hayden Software, is the simplest of the three stand-alone products. Its main dictionary contains the fewest words—20,000. Once The Speller tells you what words are suspect, you need to enter the correct spellings manually; the program won't suggest correct spellings for you. The Speller lets you mark words for later consideration without replacing them, but this has to be done by actually adding a marking character manually, word by word. Once you enter the correct spellings, The Speller will replace all the incorrect words in a single operation.



The Editor It's way beyond MemoMaker!

You won't believe all the word-processing features this $99.95* program contains—and it takes up less than 40K of memory!

***(only $79.95 for Portable Paper subscribers)**

by Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character, you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No. . .—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITORS's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the many great features listed to the right, there are five more I especially want to emphasize:

1. THE EDITOR's Lotus-like menus make it incredibly easy to use.

2. THE EDITOR creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

3. THE EDITOR will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR saves not just the current version, but the previous one as well.

4. THE EDITOR takes up less than 40K of memory.

5. THE EDITOR loads and saves files and executes commands exceptionally fast.

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR simply can't be beat. See for yourself: Order your copy, risk-free, today.

THE EDITOR $99.95
$79.95 for Portable Paper subscribers.

60-DAY MONEY BACK GUARANTEE
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P.O. Box 869, Fairfield, IA 52556 515/472-6330

THE EDITOR gives you all these great text-editing features and more:

- **Search and replace.** Just tell THE EDITOR what word or phrase to look for, and it will find every place you've used it. At your option, it will display each occurrence, or replace the occurrences either selectively or globally.
- **Edit two files at once.** THE EDITOR will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
- **Backspace delete.** You can erase the last character with a single keystroke.
- **No limit on file size.** If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-Line limit. You can have as large a file as internal memory allows.
- **File merge.** You can merge two or more files together with ease.
- Compressed and **expanded.** You're no longer restricted to bold and underline. You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
- **Unlimited line length.** Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet printer in compressed mode.
- **Lines per page.** You can specify the number of lines per page, using the control codes required by your printer.
- **Easy in, easy out.** You can exit from THE EDITOR, run another program, then type a one-word command and be back in THE EDITOR in a flash, exactly where you left off. This includes exiting and returning from DOS—which means you can delete, copy, and rename files while running THE EDITOR.
- **Right justification and automatic paragraph indent.** A simple command right-justifies your text, and at the same time automatically indents your paragraphs however many spaces you wish.
- **Undelete.** Erased something you want back? No problem. A simple command will undelete the last word, line, or block of text deleted.
- **Upper/lower case conversion.** Another simple command lets you change upper case to lower case and vice-versa without having to retype anything.

In terms of useful features per dollar, and in terms of the convenience and increased productivity you gain, I feel that THE EDITOR is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

The Formatter

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR can't handle—like: multi-line headers and footers•automatic hyphenation (you can even add your own words to the built-in dictionary)•user-specified page length and line length•automatic page numbering•tables and charts•table of contents generation•and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer.

Special combined offer—
SAVE $30:
THE EDITOR and THE FORMATTER together—
Only $99.95 total (Portable Paper subscribers only

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free, today.

THE FORMATTER $59.95
$49.95 for Portable Paper subscribers

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Now available on **ROM Backup** for the Portable Plus for an additional $95 (See ROM Backup ad in this issue.)

At last! Graphics
for the Portable and Portable Plus

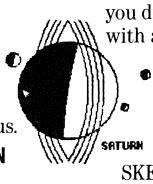
AMAZING!!
THE ANSWER

by Hal Goldstein
President, Personalized Software

Paul Grimmer has done it again.

He's the author of two of our best-selling programs: SideWinder (the sideways printng program for the HP Portables) and LINK (the program that lets you transfer data back and forth between HP hand-helds and Portables, printers, and other peripherals).

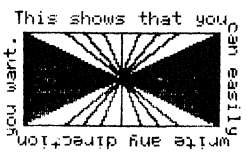
Now he's developed SKETCH, a fabulous graphics program designed for both the HP110 Portable and Portable Plus.



CURSOR BECOMES DRAWING PEN

Using SKETCH couldn't be simpler:

Put SKETCH in *draw* mode, and your cursor becomes a "pen". The pen can either be "up" or "down." When it is "down," it draws wherever you move it. When it is up, you can move it around the screen without affecting the drawing. (You set the cursor up or down simply by pressing "U" or "D." You also can set the cursor speed, and can toggle between a faster speed and a slower speed in an instant.)



The pen also has an "eraser": Just press "E," and when the cursor is down it will erase whatever it encounters.

DOZENS OF HANDY FEATURES

But that's just the beginning. SKETCH also lets you draw diagonals, boxes, circles, and arcs—each with a single key.

(If you have a mouse, you gain even more convenience: Move the mouse in any way you want, and the cursor follows instantly. See ad on the Logitech Mouse for the Portable Plus in this issue.)

SKETCH also lets you fill closed shapes with light or dark solid—or even invert the entire screen (light areas become dark and vice-versa)—with a single keystroke.

With SKETCH, you can create text in any of 5 different character sets and place the text anywhere in your drawing—including sideways or even upside-down.

SKETCH lets you save part or all of any drawing for future use, or you can print directly from the screen onto your ThinkJet or QuietJet pages.

RECOMMENDED FOR:	
HP110 Portable	•
Portable Plus	•
Portable Vectra	
HP150	
IBM PC and compat	
Available on ROM Backup for the Portable Plus	

You can also import graphics screens into SKETCH from Lotus or any other graphics program.

SKETCH doesn't limit the size of your dreawing area to the size of your screen. The total drawing area is 70% bigger than the screen on the Portable Plus, and more than 150% bigger than the screen on the Portable. As you move the cursor past your screen's borders, SKETCH automatically shifts you into the areas that were off-screen.

Now you might be expecting that all these great features come at a high price in terms of memory space. But they don't. The entire program takes up only 44K! (As I said, Paul Grimmer has done it again.)

USING IS BELIEVING

No matter how fired up you might get by reading about SKETCH or looking at the few samples we've shown of what it can do, there is no substitute for actually getting your hands on this wonderful program and trying it out for yourself.

Remember, with our money-back guarantee, if you are not completely satisfied with SKETCH within 60 days, you can return it for a full refund. Why not order a copy today?

SKETCH graphics program . . . . . $80.
$75.95 for Portable Paper subscribers.

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WEBSTER'S SPELLING CHECKER

Webster's has the biggest dictionary—over 110,000 words. When Webster's displays suspect words in context, it also displays—in a window off to the side—a list of possible correct spellings. It then gives you several options. These include leaving the word as is, leaving the word as is but marking it with a predefined character automatically, replacing it with one of the suggested spellings, browsing through the dictionary to look for other possible spellings, or entering the correct spelling manually.

With Webster's, you can look up the spellings of words not included in your document. For example, if you want to find the correct spelling of "character," you can give Webster's the nearest spelling you're sure of—or just enter "char"—and Webster's will show you all the words in its dictionary that are in the vicinity of the most likely correct spelling. Webster's also has a nice time-saving feature: It lets you preview a list of all the suspect words at once. You can eliminate words from the list or add them to your auxiliary dictionary before you begin viewing the suspect words in context and replacing them one-by-one.

In addition to working with ASCII files, Webster's will handle non-ASCII files produced by WordStar and MemoMaker.

Webster's main program and dictionary take up 207K of disk memory. The version sold by Personalized Software runs on the HP Portable Plus and HP150 but not the HP110.

THE WORD PLUS

The Word Plus has a 45,000 word dictionary which together with the main program takes up about 165K of memory. If you wish, you can use a 35,000 word dictionary instead; this saves about 30K of memory. (You can load the smaller dictionary and the Word Plus program on the HP110's A drive and still have about 40K for your document.)

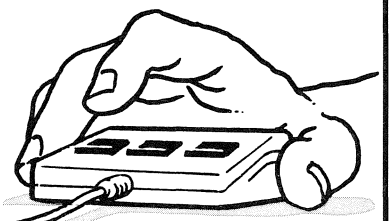
As with The Speller, you first correct all the misspelled words and then tell the program to enter the correct spellings into your text all at once. However, The Word Plus is more like Webster's in that it also suggests correct spellings.

For each suspect word, The Word Plus gives you approximately the same options as does Webster's, including the option of viewing suspect words in context. It also gives you an extra option: you can add words not just to one auxiliary dictionary, but to either of two. One of these is a dictionary of your own special terms. (You actually can have many such dictionaries, one for each kind of jargon or technical terminology you may use.) The Word Plus will search this dictionary only if you ask it to, so you can save search time by omitting your special terminology dictionaries from the search whenever you wish.

The other auxiliary dictionary is an update to the main dictionary; this is for words you use frequently but which are not in the main dictionary when you buy the product. The Word Plus will go through the update dictionary every time it does a word search.

The Word Plus has some additional bells and whistles not found in the other two spelling checkers: It lets you do a global search-and-replace on multiple words in a single pass. (You can, for example, change every occurrence of

Top-rated mouse adds convenience (and fun!) for Portable Plus users



Move a mouse around on your desk and the cursor moves around the screen. It's easier than cramping your fingers on the arrow keys—especially if you move the cursor around a lot (with Lotus, say, or with your word processor). For creating freeform graphics, a mouse is a must.*

The best mouse we know of is also one of the least expensive.

EDITOR'S CHOICE

It's the LOGITECH MOUSE (model C7 from Logitech, Inc.), and it runs beautifully on the Portable Plus when coupled with a PORTABLE MOUSE SOFTWARE program developed exclusively for us by Bill Saltzstein. The LOGITECH MOUSE was rated Editor's Choice by *PC Magazine* (January 27, 1987).

3 BUTTONS—EASY TO CUSTOMIZE

The LOGITECH MOUSE offers high resolution, precision tracking, and a convenient 3-button design. (The Microsoft mouse, which sells for $100 more, only has two buttons.)

With our PORTABLE MOUSE SOFTWARE, you can assign a different keystroke to each of the buttons. You can also assign a different *set* of three keystrokes for each of your applications.

Our PORTABLE MOUSE SOFTWARE also lets you control the distance that the cursor will move for a given movement of the mouse.

TRY IT AT OUR RISK

Not sure you'll like using a mouse with your Portable? The only way to find out is to try one. Remember, you can order any product from us, use it for 60 days, and then return it for a full refund if you are not completely satisfied.

Order a Logitech or Microsoft mouse for your Portable Plus, risk-free, today. (Don't forget to order our PORTABLE MOUSE SOFTWARE and cable too; you'll need them to run either mouse with your Portable Plus.)

Portable Plus Mouse Systems (Logitech Mouse, Portable Mouse Software, Cable) . . . . . $219.00. $179.95 for Portable Paper subscribers.

For pricing of individual components and Microsoft Mouse, see "Additional Products" opposite the order form in this issue.

A WORD ABOUT THE MICROSOFT MOUSE

The Microsoft mouse has only 2 buttons, but costs $100 more than the 3-button Logitech mouse. Nevertheless, the Microsoft mouse may be your best bet if you want the IBM PC-compatible graphics software it comes with.

If you already own a serial Microsoft mouse—or would like to buy one—there's no need to buy the Logitech Mouse as well; to use the Microsoft mouse with your Portable Plus, all you need is our Portable Mouse Software and a cable to connect the mouse to your Plus.

60-DAY MONEY BACK GUARANTEE

See order form for details.

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RECOMMENDED FOR:			
HP110 Portable		Portable Vectra	•
Portable Plus	•	HP150	
IBM PC and compatibles			•

*See ad for Sketch, the graphics program for the Portable Plus, in this issue.

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"John" to "Jonathan," every "it's" to "it is," and every "utilize" to "use" all at once.) It has a FIND feature that lets you look up all the words with a given prefix or suffix. (Useful if you want to find rhyming words. To find the words that rhyme with, say, "Portable," just enter the command **find *ortable** and you'll be presented with a list that includes "comfortable," "importable," and "unsupportable.")

In addition to counting the number of words in a document, The Word Plus can tell you the frequency of use of each word. It also can alphabetize the words in a file, and has an "anagram" feature that will unscramble words that are scrambled. (Example: The command ANAGRAM LECUN gives "UNCLE" as a result.)

THREE-WAY COMPARISON

In comparing the three spelling checkers, let us first say that no spelling checker is perfect. Even Webster's, with its 110,000 word dictionary, won't suggest the correct spelling every time. We tested it with "weird" deliberately misspelled as "wierd," and it suggested, among other things, "wider," "wield," "wined," and "whiter." But not "weird." (However—and this brings up a good point about spelling checkers in general—if in a real-life situation you meant "weird" and typed "wierd" instead, you would know what your mistake was as soon as the program flagged it. The only reasonable possibilities are "wierd" and"weird," and if the first one is wrong, the second must be right. The point is that a spelling checker, even though imperfect, can give you 100% correctly spelled documents almost every time if it's used along with some common sense.)

The criteria we used in comparing The Speller, The Word Plus, and Webster's are: operating environment, speed, user interface, accuracy, flexibility, and overall price/performance ratio.

OPERATING ENVIRONMENT

The Speller, sold by HP, runs on the HP110 Portable and HP150. The Word Plus runs on both Portables, the 150, and the IBM PC and compatibles. Webster's runs on all the above except the HP110.

SPEED

Surprisingly, the length of time needed by the three programs to check the spellings of the words in our test file was inversely related to the size of their dictionaries. It took The Speller about 65 seconds to check an 80-word file in which most of the words were deliberately misspelled. It took The Word Plus 55 seconds. Webster's—with 5 times as many words in its dictionary as The Speller and 2 times as many as The Word Plus—did the same job in just 25 seconds! (It took Webster's only 90 seconds to check a 2000-word article.)

USER INTERFACE

The Speller is the simplest program, and one would expect its screen prompts to be simple as well. They are, but they're not always self-explanatory; you do need to read through the short manual to know what each menu option means. The same can be said of The Word Plus. Once you've read through the manual, everything makes sense,

and you can step through the procedure of finding and correcting spelling errors in a straightforward and logical fashion. Webster's is in a class by itself. Its user interface is one of the nicest we've seen in any kind of program. On a single screen, for example, you see a section of your text with the suspect word highlighted, a window containing Webster's suggested correct spellings, and a menu of your command options with brief and clear explanations of what each one means.

The step-by-step procedure in Webster's is intuitive; Webster's does things just the way you would expect.

ACCURACY

A spelling checker's ability to accept already correct spellings and find incorrect ones is mainly a function of dictionary size. So one would expect Webster's to score highest here. And it does. It also scores highest in its ability to suggest correct spellings. And it's set up to handle things that neither of the other two programs can, like adding a missing period at the end of "Dr" or telling you when you've erroneously repeated a word (like "the the").

If you don't know the correct spelling of a word, you can even spell it phonetically, and in many cases Webster's will give you the correct spelling. For example, it will correct "farmacy" to "pharmacy." (However, there's a limit. Webster's won't correct "farmasy" to "pharmacy." In this case, the incorrect spelling is apparently too far off.) Interestingly, Webster's was unable to correct "ohuse" to "house" even though the product literature gave this as an example of what the program can do. When we tried "ohuse," Webster's suggestions all began with the letter "o". (The Word Plus did about the same, but then we remembered its ANAGRAM feature. When we entered ANAGRAM OHUSE, out came "house" as the answer!)

FLEXIBILITY

By flexibility, we mean the number and kind of options each program offers the user. Clearly, The Speller is the least flexible because it only flags suspect words; it makes no attempt to suggest correct spellings. Although Webster's has the best user interface, The Word Plus is more flexible in that it offers features not found in Webster's. These include the ANAGRAM and FIND functions, the word frequency count, and the global search and replace on multiple words in a single pass.

PRICE/PERFORMANCE

The Speller retails for $49.95. The Word Plus retails for $150. And Webster's retails for $79.95 in a version that runs on the Portable Plus. (*Portable Paper* subscribers can purchase The Word Plus for $99.95 and Webster's for $69.95).

Considering the size of Webster's dictionary, its speed, its user interface, and its many capabilities, Webster's would seem to give the best value for Portable Plus users. However, Portable Plus users still may opt for The Word Plus if they want any of the special features that it alone offers. The other major advantage to Webster's for Plus users is its availability as a ROM Backup from Personalized Software ($179).

If you use the HP110 and you're a good speller and want mainly to check for typos, The Speller may be all you need. Once it flags any misspelled words, you can simply correct them yourself. If you want a larger dictionary, more features, and a better user interface then you will probably want to purchase the Word Plus.

BUILT IN SPELLING CHECKERS

Each of the full-featured word processors available for the HP110 and Portable Plus include a spelling checker (or have one as an associated add-on product). The advantage to using such a word processing / spelling checker combination is that you can spell-check your document in an environment related to your word processor. For example, in WordPerfect, you can invoke the spelling checker at any time right from within your editing session.

There is another important advantage of using a spelling checker associated with a word processor. You do not lose any internal formatting information when doing the spell-checking. For example, in WordPerfect there are internal formatting markers that keep track of margins, page length, headers, footnotes, columns, table of contents, mail merge, and so on. If you save such a WordPerfect file as an ASCII file in order to use Webster's, much of this information gets lost. Alternatively, in WordPerfect, MSWord, and most of the others, you could print your document to a file rather than the printer and then run the file through Webster. The "fruit" of the internal format markers (that is, the table of contents, headers, footnotes, and so forth) gets saved in a **print file**. However, you lose the internal format markers themselves if you ever want to re-edit the file.

However, there is a disadvantage in using these full-featured word processors and associated spelling checkers in the HP Portable environment: the amount of disk space required. If you are not using a ROM product like MS Word or MultiMate, you are already using up a lot of disk space even without the spelling checker. If you decide to use a spelling checker with the word processor, whether or not your product is in ROM, you lose more disk space. You could, of course, choose to run the spelling checker off the external disk drive—but that is slow and exhausts the battery of the temperamental HP9114. Because of these space considerations, depending on how you use your word processor, Webster's on ROM Backup might be your best choice.

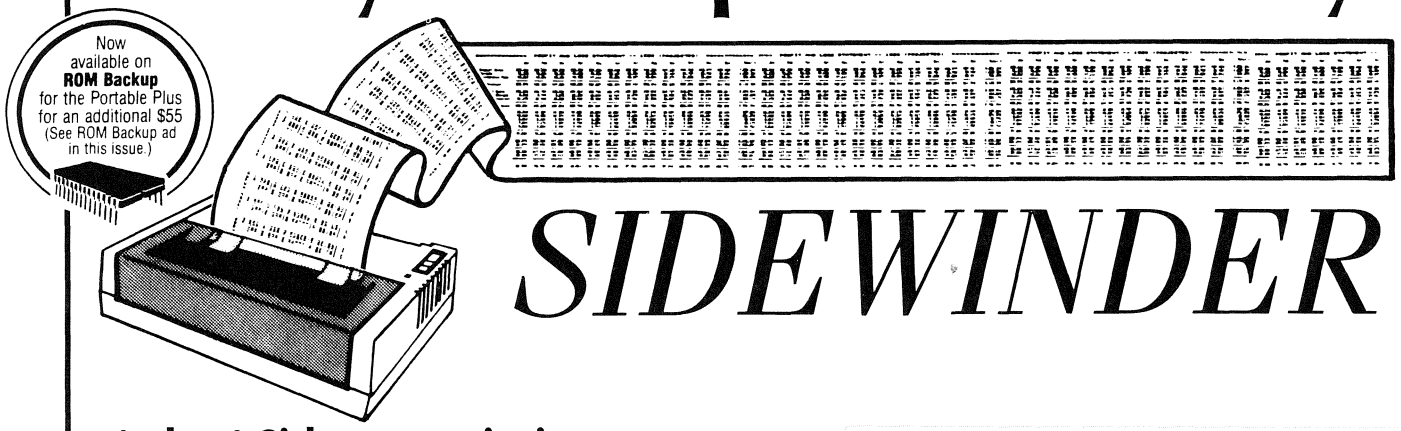
We will now briefly examine each of the full-featured word processor/spelling checker combinations that run in the HP Portable environment.

MS Word

MSWord runs on disk for the HP110 and on ROM for the Plus. The MSWord speller is disk-based, works with either version of MSWord, and must be ordered as a separate product from HP or an HP dealer.

Microsoft Spell is a stand-alone speller for the HP version of Microsoft Word (1.10). It is fully integrated into later versions of Microsoft Word, beginning with version 2.0. The HP version of Microsoft Spell requires approximately 184K for the spelling program, its 40,000 word dictionary, and built-in utilities. Microsoft Spell is unique in that it first proofs the entire document and then allows you to make your corrections—alphabetically. It is also unique

No more cutting and pasting- Now you can print it sideways!



SIDEWINDER

At last! Sideways printing for the HP Portable, Portable PLUS, and ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers.)

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53*rows *sideways* - for as long as your paper supply lasts. You'll never need to cut and paste again!

SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

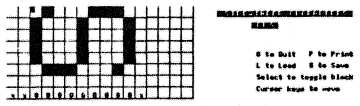
In addition, a built-in mini text editor lets you get inside your print files and easily create double-width characters and underlines.

SideWinder $69.95
$59.95 for Portable Paper subscribers

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software $7.50 or by mailing a self-addressed $.39 stamped envelope and the SideWinder master disk.

OPTIONAL EXTRAS: Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

SideChar lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's built-in characters. . .create italics. . . Hebrew letters. . . integral signs. . . whatever sideways characters you wish.

Sketch & Print lets you make line drawings on your screen using the cursor and function keys.

It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

$10 for both utilities when purchased with SideWinder

For a *complete* graphics software program, see ad for "Sketch" in this issue.

Order form and guarantee are on inside back cover or send check or credit card number to Personalized Software, PO Box 869, Fairfield IA 52556 (515) 472-6330.

*105 rows for QuietJet Printer

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in that it allows you to review all of your spelling corrections, even after you've made them. Corrections are permanently entered into your document when you're satisfied with the proof. You can utilize up to five different dictionaries at a time: main, update, high frequency, user, and document. The document dictionary is very handy for proofing special words that are peculiar to a specific document. In addition to the speller, MSSpell comes with utilities to look up individual words, count the number and frequency of words, and solve anagrams. MSSpell is an add-on well worth the small investment of $80.00.

MultiMate

The MultiMate speller program is part of the ROM-based MultiMate Professional Word Processor. It is readily accessible from the main menu and from within a document by depressing Shift-Ctrl-8. The dictionary itself is not part of ROM and must reside in RAM or external disk. MultiMate can be configured to look for its 80,000 word dictionary (217K) on any specified drive. A customized dictionary may be used for your own special words that aren't normally found in the main dictionary.

MultiMate's speller is a pleasure to use and is very fast, especially from the Edisc. Despite it's speed, it is highly disk-intensive, and, like most spellers, can drain the HP-9114 disk drive if you're not careful. The program is very flexible in that it allows you to spell-check a word, a phrase, or an entire document while you're in a editing text session.

WordPerfect

WordPerfect runs on the Plus on disk only. The spelling checker is part of the program, but you can choose not to include on disk the extra 340K required for the 115,000-word dictionary. The spelling program is well-integrated within WordPerfect and can be invoked any

time while editing a document. As with Multimate, the speller is a pleasure to use, fast, flexible, and can drain the HP9114.

A full-featured thesaurus also comes with WordPerfect. It too can be invoked any time while editing a WordPerfect document. The thesaurus takes up 360K worth of disk space, and can be optionally removed. It is the only thesaurus that works on the Portable Plus. No thesaurus works on the HP110.

T/Master, T/Maker

T/Maker and T/Master feature fast spelling check modules and 55,000 word dictionaries that are seamlessly integrated with the rest of the program. It is possible to look up the spellings of individual words, or by "wildcard." The proof feature produces a correction list of all marked words. After the correction list has been edited, the proofed file is corrected all at once.

The T/Maker and T/Master spellers are very fast and can be used to proof any ASCII file produced by MemoMaker, WordStar, or The Editor. Similarly, Webster's, The Word Plus, or The Speller can be used on any T/Maker or T/Master file.

WordStar

A spelling checker (CorrectStar) and mail merge product can be ordered as an adjunct to the HP110 version of WordStar. Portable Plus users can run the newly released WordStar 4.0, which includes a spelling checker, in Alternate mode.

CorrectStar is available as a part of WordStar Professional Options through HP. It runs on the HP110 and the HP150, but not the Portable Plus. CorrectStar occupies approximately 60K, and its 80,000 word dictionary consumes a whopping 346K.

Of all the spelling verification programs, we've (David) had the most fun using CorrectStar. Its authors must have had unusual personalities, since the program frequently comes up with humorous suggestions.

Although there is some disk-switching involved, CorrectStar runs well on the HP110. It is one of the best spelling verification/correction programs available for WordStar.

Portable Plus users will find a speller integrated into WordStar 4.0. The spelling program and dictionary take up about 300K. Users can choose whether or not to include the WordStar speller and dictionary with WordStar. You can check the current word or the rest of the document. Also, as with CorrectStar, you can have multiple choices for corrections. It is a fast, accurate spelling checker. The thesaurus that comes bundled with WordStar will not work on the Plus.

WordStar was the industry standard word processor for a number of years. The three stand-alone spell checkers reviewed in this article were all written when WordStar was at the forefront. Therefore, all three stand-alone programs can read WordStar formatted files directly. This feature is also convenient for Portable Plus MemoMaker users since Plus MemoMaker normally saves its files as WordStar formatted files.

ORDERING INFORMATION

The following products are distributed by either Hewlett Packard or Personalized Software. All Personalized Software products listed below (with the exception of Webster's on ROM Backup) can also be obtained from computer dealers or manufacturers of the product directly, but without additional 3 1/2" HP formatted disk or customized instructions for how to use the product on the Portable.

Any product description beginning with *Hewlett Packard* can be ordered from HP directly calling (800) 538-8787.

Any product description beginning with *Personalized Software* can be ordered using the order form in back of the issue or contacting Personalized Software, P.O. Box 869, Fairfield, IA 52556, (515) 472-6330.

Stand Alone Word Processors

The Speller

Hewlett Packard. Runs on Portable, HP150. HP35154D, $49.95.

The Word Plus

Personalized Software. Retails for $150 from *Oasis Systems, San Diego. Portable Paper* subscriber price: $99.95.

Webster's New World Spelling Checker

Personalized Software. Manufacturer: Simon & Schuster, New York, NY. The HP Portable Plus and HP150 version of Webster's Spelling Checker: $79.95, $69.95 to *Portable Paper* subscribers. Webster's is also available from Personalized Software on two 128K Backup ROMs for owners of the Portable Plus for an additional $179. You must own the disk-based version in order to purchase the ROM Backup.

Word Processor/Spelling Checker Combinations

MSWord

Hewlett Packard. HP110, HP150 disk based version: HP45474D, $375. Portable Plus ROM based version: 45549K Opt. 400, $375, 2 plug-in 128K ROMs—requires 140K of internal RAM.

Optional spelling checker runs on HP110, Portable Plus, and HP150. HP45556D, $80.

MultiMate

Hewlett Packard. Portable Plus only. HP45554K Opt. 400, $495, 2 plug-in 128K ROMs—requires 152K of internal RAM. Includes spelling checker.

T/Maker, T/Master

Personalized Software. Manufactured by T/Maker Company, Mountain View, CA. T/Maker runs on HP150, HP110, Portable Plus. T/Master runs on Portable Plus and HP150. Retail for both: $295. *The Portable Paper* subscriber price: $279 for T/Master, $199.95 for T/Maker. Spelling checker included.

WordPerfect

Personalized Software. Separate versions that run on the HP Portable Plus and HP150. (HP150 version only available from Personalized Software.) Manufactured by WordPerfect Corp, Orem, UT. Retail: $495, *Portable Paper* subscriber price: $299. Spelling checker included.

WordStar

Hewlett Packard. Version 3. Runs on HP110 and HP150. Three options:

WordStar Professional (includes WordStar, MailMerge,

More than 50 time-saving utilities for your HP Portable or HP150—all on a single disk

Read this list.
It may look long and boring, but it can save you an incredible amount of daily effort.

It's a list of the more than 50 programs on *Portable Utilities Disk, Volume 1: DOS Tools.* Each program performs a specific task to make life with your Portable more enjoyable and productive.

The programs are all in the public domain, which means that if you searched long enough you could find them for free on various electronic bulletin boards, in magazines, and in the archives of local user groups. But consider this: Even if you had the time to track this many programs down, what about evaluating them and making sense of the documentation? It would be a formidable task, but we have good news: You don't have to do it—we've already done it for you!

That's right—we've combed through hundreds of public domain utility programs that run on the Portables and HP150, and have selected only the best ones for inclusion in *Portable Utilities Disk, Volume 1: DOS Tools.* We've not only made sense of the documentation, but in many cases we've actually rewritten it. (**A printed, 65-page user manual containing program documentation and plenty of examples in included with the disk.** The manual is *conveniently indexed by subject*, so all you have to do is look up the name of the task you want done. You don't have to remember the names of the programs.)

And we've even changed some of the programs themselves so they work better and so their message displays are easier to understand. (Given the state of the art in writing and testing software, there's no guarantee that every item of software works as documented without a hitch. However, most of the testing and evaluating was done by Hal Goldstein, publisher of The Portable Paper, and by Gary Goodman and Thomas Page. Anyone who has read Gary's and Tom's articles in past issues of The Portable Paper already knows of their conscientiousness and thoroughness.)

So look through the list. If even *one* program proves useful, *DOS Tools* could pay for itself immediately. With more than 50 documented and tested programs to try out and use, it's the bargain of the century. Order yours today.

Portable Utilities Disk, Volume 1:
DOS Tools $49.95
($39.95 for Portable Paper subscribers)

Contents of Portable Utilities Disk Vol. 1: DOS Tools

ADDCOL.COM Joins two files horizontally by appending corresponding lines.

ARC512.ARC Archived ARC file compression and library utility.

ARCE.COM Extracts ARChive files from ARC 5.12 and previous versions.

ASK.COM Adds interactive capability to batch files. Prompts user with message and waits for yes/no response.

BEEP.COM Makes a beep sound.

CHANGE.COM Changes or displays file attributes (read-only, archive, system, hidden).

CLEAN.COM Converts WordStar HP150 or Portable Plus MemoMaker document files to ASCII and removes control codes.

COPYNEW.COM Backs up files if no identical file on the destination disk. Also backs up whole directory structure creating matching subdirectories.

CPU.COM Displays computer's clock speed.

CVTBIN.COM Converts files from ASCII to binary when downloaded with CompuServe READ command.

CYPHER.COM Enciphers and deciphers a file to keep it confidential.

DIRALL.COM Displays attributes and pathnames for ALL files on a disk.

DIRS.COM Gives total disk space occupied by a set of files.

DUMP.COM Dumps and edits a disk or file in hexadecimal and ASCII.

FDATE.COM Changes the time-date stamp on a file.

FDUMP.COM Lists a file in hexadecimal and ASCII.

FF.COM Sends a form feed to the printer.

FGREP.COM Searches a group of files for a specified string.

HC.COM Converts binary files to/from hexadecimal ASCII files.

HP IBM.COM Does a "best fit" translation from HP ROMAN 8 character set to IBM PC Line Draw character set.

IBM HP.COM Does a "best fit" translation from IBM PC Line Draw character set to HP ROMAN 8 character set.

INSTALLP.COM Automates installing an application program on RAM disk—the HP Portable/Portable Plus Install Utility Program.

LABEL.COM Labels or changes the label name on a disk.

LC.COM Counts lines in each file; useful in determining amount of paper needed to print.

LF.COM Sends a line feed to the printer.

LJET.COM LaserJet pronter configuration program for the HP Portable. Makes selection LaserJet format easier.

MMTOP.COM Causes Portable Plus MemoMaker to print without usual 5-line top margin.

MOVE.COM Moves one file to another directory without copying.

MOVEALL.COM Moves a set of files to another directory without copying.

OFF.COM Shuts off the HP Portable from DOS.

PACK.COM Packs a disk. Does not have subdirectories bug of earlier version.

PC.EXE Allows some IBM programs to be run on HP150.

PCBOSS.COM File manager for IBM PC and compatibles only.

PRINTIT.COM Print formatting program, simple but effective.

PRNCONF.COM Allows ThinkJet printer to function as Epson printer; also sends escape sequences to the PRN device.

RAMDSK.ARC Archived utility for HP150 only; creates internal RAM disk.

RENDIR.COM Renames subdirectories.

RNGNAME.COM Displays and restores range names for Lotus worksheet.

ROMAN8.WKS Provides ability to enter any Roman8 character into Lotus worksheet.

SDL.COM Produces directory listings sorted by name, size, date, or extension.

SEPARATE.COM Breaks large text files into smaller files for MemoMaker.

SM.COM SpaceMaker. Converts. EXE files to .COM files and thus saves disk storage space and disk access time.

SQPC.COM Squeezes files to make them take up less space. Unsqueeze with TY.

TEE.COM Causes a program or file to be output to both the screen and a file or printer.

TJETA.COM Configures ThinkJet printer easily from the HP Portable.

TOWS.COM Converts ASCII document files to WordStar and Portable Plus MemoMaker format for editing and reformatting.

TRANSLIT.COM Converts one or more characters of one file to different character(s) and copies result to second file.

TREEDIR.COM Displays names of all files in each directory along with date, time and file size.

TRIM.COM Extracts selected columns from a file.

TY.COM Unsqueezes files squeezed by SQPC.

VDL.COM Allows user to selectively delete files from a group of files. Program lists files one by one and asks user whether to delete.

WAIT.COM Delays execution of a batch file until specified time.

WD.COM Saves and restores the working directory.

WHEAROUT.COM Gives percent of wear on disk in HP 9114 disk drive.

WHEREIS.COM Searches disk to find the specified file.

APPENDIX A Describes the contents of subdirectories/HP110,/SOURCE,/123DEMO found on the *DOS Tools* disk.

UTILS.DOC Reprints on disk *The Portable Paper* Vol 1, Issue 4, "Utilities" article. Gives practical examples of many of the files on the DOSTools disk.

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	

Now available on **ROM Backup** for the Portable Plus for an additional $129 (See ROM Backup ad in this issue.)

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

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CorrectStar, StarIndex), HP45427D, $550.
WordStar, HP45400D, $350.
WordStar Professional Options, (includes MailMerge, CorrectStar, StarIndex) HP45429D, $250.
Personalized Software. Version 4.0. Runs on Portable Plus and HP150. Current owners may upgrade directly through MicroPro for $89.00 to receive WordStar 4 on 5 1/4" disk. Contact: MicroPro, Order Update Department, P.O. Box 7079, San Rafael, CA 94901-0079. (800) 227-5609 or (800) 343-3000, Ext 652.
WordStar 4.0 retails for $495. *Portable Paper* subscriber price is $299 and includes HP formatted 3 1/2" disk, customization instructions, and HP150 utility.

RightWriter—Grammar and Style Checker

By Gary Goodman

Its makers call it an "Automatic Document Proofreader & Writing Style Analyzer". RightWriter analyzes your report or document for grammar, spelling, reading level, strength of delivery, and more. Using over 3000 rules, RightWriter checks grammar, style, usage, and punctuation, and checks your words against its 45,000-word dictionary. It inserts comments into a copy of the text on how to improve your writing. A summary report contains its evaluations, suggestions for improvement, and a list of uncommon and jargon words.

RightWriter works with ASCII, MemoMaker, The Editor, WordStar, MSWord, MultiMate, and many other files.

RightWords is an auxiliary program that lets you customize the dictionary with specialized vocabularies for technical fields, such as electronics, computer science, aviation, and defense, or for business or personal use.

RUNNING RIGHTWRITER AND RIGHTWORDS

RightWriter consists of a main program and three main dictionary files. Collectively these files take 254K, including a configuration file. *[Ed—RightWriter 2.1 owners with a* **right.exe** *file of over 190K, see note in the "News From Personalized Software" in this issue to find out how to obtain a 108K version.]*

You can put the dictionary files and program files on electronic or external disk or both. To run the program simply starting it from PAM or type **right** or **c:right** from DOS.

When you run the program you are asked for input and output file names (if you don't supply that in the DOS command). The input file never gets touched. The output file (which can be a file, the printer, or the screen) contains a copy of the original input file with comments inserted within the text. The output file expands to about one and one half the size of the input file. The comments refer to misspellings, awkward phraseology, long sentences, complex sentences, unmatched parentheses, and so forth.

RightWords revises the RightWriter dictionaries. You can run it from the A or C drive. The RightWriter dictionaries must be present to run the program. (Make backups first.) RightWords runs very slowly with C as the default and this could cause the 9114's battery to run down if not fully charged. Loading the program from C with A as the default drive (by executing **c:words** from DOS) works very well. You will need about 136K of internal memory and 110K of scratch space. The RightWords program takes 64K.

It is very convenient to have both RightWriter and RightWords on the same disk. RightWords can rewrite the new dictionaries to the same directory where they will be used by RightWriter.

The standard RightWriter and RightWords files together occupy less than 500K of disk space on a standard formatted 700K double sided disk. Both programs require so much memory that most of the HP110's A disk must be cleared and PACKed before they can be run.

USING RIGHTWRITER

A previous review in *The Portable Paper* by Ed Keefe (Vol 1, No. 3, page 22) contained an example of the proofreading comments inserted in some sample text. The example was intriguing, but I still wondered if this program was really useful or just novel. And would it work for technical writing?

I have now used RightWriter for over a month on letters and technical documents written in the very structured D.O.D. style. My wife has used it for college reports. We both found that the program is simple to use and helps us write more directly and simply.

RightWriter flags all occurrences of passive voice and long sentences. Not that these are wrong, but their overuse weakens your writing. The program also points out many little things, not necessarily errors, that I often overlook—awkward, overused, or wordy phrases, etc. Since using RightWriter, I have become much more aware of the complexity of the English language and the difficulty of classifying grammar into rigid rules.

Although RightWriter was not designed primarily as a spelling checker, it does check spelling. It also prints a list of unrecognized words.

The program needs 216K of memory to run. Although too large to store and use on the HP110 or on some Portable Plus's, it will work easily from an external drive.

RightWriter does have its limitations. It can be confused by such things as misplaced periods, nested parentheses, or complex sentences. It does not understand the meaning of words and cannot tell when your tenses are inconsistent. And it doesn't fully appreciate complex literary writing.

It would probably take a program ten times the size of RightWriter to do all the things a professional proofreader does. And it would probably not run very well on today's PCs. However, most of us don't have a friendly professional proofreader, and we probably wouldn't like him or her telling us EVERYTHING that is bad about our writing. A program doesn't judge us by our writing, and we can ignore its comments with impunity.

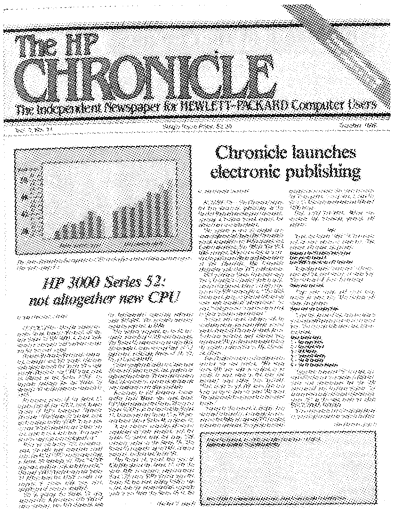
ORDERING INFORMATION

RightWriter and RightWords normally come on 5 1/4" disks and can be run from DOS without modification. They are manufactured by RightSoft, Inc., 2033 Wood St., Suite 218, Sarasota, FL 33577, (800-992-0244) and retails for $95.

Personalized Software adds an additional 3 1/2" disk to the packaging along with PAM installation programs for

PCI delivers the news!

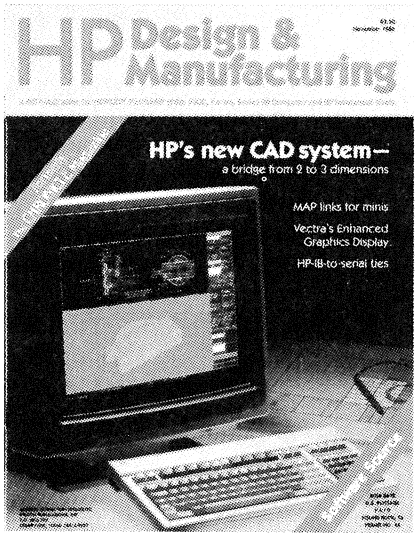
News


The HP
CHRONICLE
The Independent Newspaper for HEWLETT-PACKARD Computer Users
Chronicle launches electronic publishing
HP 3000 Series 52: not altogether new CPU

The HP Chronicle

The only newspaper devoted exclusively to HP 3000 computer users. Each monthly issue includes the latest news, productivity tips, new products, help columns, and classifieds.

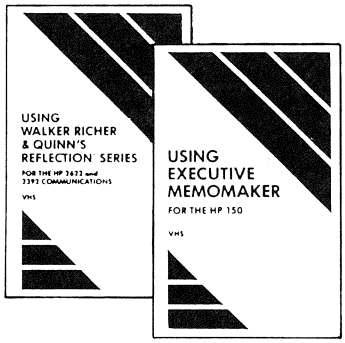
Scientific Data


HP Design & Manufacturing
HP's new CAD system—
a bridge from 2 to 3 dimensions
MAP links for minis
Vectra's Enhanced Graphics Display
HP-IB-to-serial ties

HP Design & Manufacturing

The journal for scientists, engineers, and others who use HP technical computers. Each monthly issue includes programming tutorials, new product updates, applications features and technical trouble-shooting.

and Training



SVP Software Video Productions

Training courses for the HP computer user. Software Video Productions offers USING EXECUTIVE MEMOMAKER for the HP 150 and USING WALKER RICHER & QUINNS REFLECTION SERIES for the HP 2622 and 2392 Communications. Up-to-date training techniques and individualized instruction at affordable prices.

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U.S.A. (800) 531-5093 or in Texas call (512) 250-9023.

PP.11.86

automatic installation and with instructions for running RightWriter on The Portables. *The Portable Paper* subscribers may order the package for $89. For an additional $179, RightWriter owners may purchase RightWriter on two 128K ROM chips for The Portable Plus.

The RightWords supplementary dictionary program costs $29.95. When ordered from Personalized Software, an additional copy is included on HP formatted 3½" disk.

Text Enhancers Extend MemoMaker's Productivity

By David Hughes

THE LAPTOP REVOLUTION

Early laptop computers were neither very powerful nor sophisticated. They didn't offer all the luxuries of their desktop counterparts. Users were expected to upload their reports as rough drafts to a desktop computer for final processing. This concept gradually changed as the performance of portable computers improved. As the corporate world grew accustomed to using small computers, its needs, desires, and expectations grew. Business people expected laptop computers to perform as well as their desktop counterparts.

Hewlett-Packard designed MemoMaker as a simple, easy-to-use text editor for the travelling professional. It was perfect for everyday items: memos, letters, outlines, briefs, and short reports. There was no need to learn complicated word processing commands, since the system was entirely softkey driven. The Editor from Personalized Software came along and significantly expanded MemoMaker's editing capacities.

Neither MemoMaker nor The Editor was designed as a complete word processing system. However, MemoMaker became popular with many users since it was built into the Portable and was available with Time Management in ROM format for the Portable Plus. The Editor also became popular since it offered many more editing features than MemoMaker and did not take up much electronic disk space. Some users recognized Memomaker's and The Editor's value and tried to overcome their limitations.

EXTENDING THE USEFULNESS OF AN OLD FRIEND

If you are addicted to MemoMaker, want to rely upon ROM-based software, can't afford a new word processor, or don't want to pay the price for WordStar, MSWord, WordPerfect, or MultiMate, then perhaps a good text enhancer will add some glitter to your otherwise drab-looking words.

There are currently three programs specifically designed to help MemoMaker and The Editor make better use of the HP ThinkJet printer. These three text enhancers are PrinterTalk, Format110, and HPrint.

A text formatter is another type of program that can extend the capabilities of MemoMaker. A formatter differs from an enhancer in that it can fill lines, hyphenate, justify paragraphs, merge files, and create tables. Enhancers may perform some of these functions, but most of them rely upon the text editor to fill, justify, and hyphenate. The Formatter, written by Ed Gilbert, author of The Editor, is a text formatter.

In order to use any of the four programs you must first create your file in MemoMaker or The Editor (or any program that can save a file in ASCII format). While in MemoMaker, you enter certain extra characters (commands). For example, if you plan to use PrinterTalk, you enter **@t** at the point where you want to change from the normal six lines per inch to eight lines per inch. If you plan to use HPrint, you can enter **@D** within MemoMaker where you want today's date automatically printed in your Memo. When you finish typing your document in your word processor, you then use one of the four programs to actually print the document. For example, when PrinterTalk prints the document, the ThinkJet starts printing at eight lines per inch when it encounters the **@t**.

EASY TO USE?

If you're concerned about using a "new" text formatting system, relax! With the exception of The Formatter, the personality of each enhancer is, remarkably, as friendly as MemoMaker itself.

The Formatter is an exceptional program, but it was not designed with a visible, friendly user interface. It is a very powerful, "compiled" word processor and is actually a relative of the Unix-style, NRoff text formatter. Although sometimes a bit difficult to use, you easily become accustomed to it. You can also configure it for most printers.

WHAT ABOUT THE ENVIRONMENT?

Though you should certainly examine the Portable environment when considering a new product, this is far less critical for the Portable plus.

Format110 is the smallest product, consuming approximately 23K. There are two versions of PrinterTalk: the complete version consumes 39K, and the condensed version requires 25K. The Formatter occupies approximately 62K. HPrint requires about 60K, and additional space is required for each additional character font table. Unless you expect to print documents while on the road, or have them in ROM on the Plus, you'll probably leave most of these programs behind.

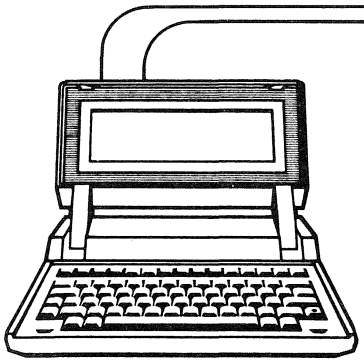
PRINTERTALK: THE ORIGINAL ONE

PrinterTalk (See review in the May/June 1986 issue) is the original solution for overcoming MemoMaker's limitations. Written by Hal Goldstein, publisher and editor of *The Portable Paper*, it provides a "way of escape" from MemoMaker's dislike for imbedded control characters and allows you to use a wide variety of type styles (whatever your printer supports). The program's defaults fully support the ThinkJet printer and LaserJet A/B font cartridges. You can also define other printer codes.

PrinterTalk extends MemoMaker's usefulness by providing multiple copies, automatic page numbering, single-sheet feed, line spacing control, and user-defined codes. Multiple fonts may be specified in a line. PrinterTalk also features a nifty, line-oriented typewriter mode that's great for small typing chores. And, it is very user-friendly.

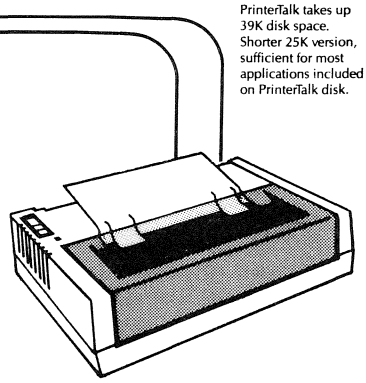
FORMAT110 DOES IT LIKE MEMOMAKER

Format110 (See review in the May/June 1986 issue) is a very simple, yet productive text enhancer written by Ed Keefe



PrinterTalk
The MemoMaker Enhancer

It does the things you wish MemoMaker could do!



PrinterTalk takes up 39K disk space. Shorter 25K version, sufficient for most applications included on PrinterTalk disk.

MemoMaker users: Now you can take advantage of *all* your printer's features, not just bold and underline. PrinterTalk Version 1.2A, an easy-to-use software package from Personalized Software, prints your MemoMaker files, allowing you to:

- Change attributes (type styles) anywhere *within* the files you print—
  Bold, underline, *italic*, compressed, **expanded**
  (whatever your printer supports)
- Control numerous print functions, including:
  -number of copies
  -lines per inch
  -lines per page
  -spacing (including double, triple, quadruple)
  -automatic page numbering
- Avoid paper waste by preventing annoying form feeds
- Use your HP110 as an electronic typewriter
  -PrinterTalk connects your keyboard directly to your printer
  -Great for labels, envelopes, short notes, any small typing task
- Perform advanced features supported by your printer, such as superscripting and subscripting.

CUSTOMIZED FOR YOUR PRINTER

PrinterTalk stores the "escape sequences" (command codes) that tell your HP printer how to perform attributes and print functions. Escape sequences are already built into PrinterTalk for ThinkJet, LaserJet (and cartridges), and other HP printers, and you can easily customize PrinterTalk for any other printer as well.

SINGLE-KEY OPERATION

Instead of a hard-to-use, intricate series of control codes, a single labelled function key sends commands to your printer. Simple "help" screens in plain English tell you what to do, and all commands are summarized on a single sheet of paper for ready reference. The user manual is clear and concise, and includes easy-to-follow examples of all commands.

*Use you printer's **full** potential!*
Order PrinterTalk Version 1.2A today!

$49.95 *including manual*

***$44.95** for Portable Paper subscribers*

FREE UPDATE: If you already have version 1.2 or earlier, send it to us with a self-addressed stamped envelope (or send us $7.50), and we'll replace it with version 1.2A (20% less disk space than 1.2).

Now available on **ROM Backup** for the Portable Plus
(See ROM Backup ad in this issue.)

RECOMMENDED FOR:	
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Portable Plus	●
Portable Vectra	
HP150	
IBM PC and compat.	
Available on ROM Backup for the Portable Plus	

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P.O. Box 869, Fairfield, IA 52556 515/472-6330

SPECIAL OFFER:

Personalized Software's Hal Goldstein and FastAid's Ed Keefe Team Up! Put the MemoMaker enhancing utilities of

PrinterTalk & Format110

to work for you!

Special Low Price:
BOTH PROGRAMS now ONLY $59.95*—A $90 VALUE!

Format110 lets you format headers, footers, and page numbers - all centered, left or right justified; chain or merge documents; and preview your document on screen. Format110 also lets you send your document to your disk file or printer and compensates for "widow and orphan" lines. Disk includes the manual and Turbo Pascal source code. Format110 usually sells for $39.95, now with PrinterTalk it's only ***$59.95**.* ***Order both today*** and get all the text formatting and printing control you need.

Existing Format110 owners: get PrinterTalk for only $19.95.
Existing PrinterTalk owners: get Format110 for only $19.95.

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of the FastAid Co. (Ed writes the "Through The Looking Glass" column for *The Portable Paper*). Format110 looks so much like MemoMaker from the appearance of its banner line and softkeys, you may mistake it for MemoMaker itself.

Format110 takes a different approach to overcoming MemoMaker's limitations. Within The Editor or MemoMaker you can embed WordStar-like 'dot' commands for headers, footers, and page numbers. Or you can enter them from within the Format110 program and print from a menu. This method may be the most useful to those who want to print their documents using MemoMaker and don't mind entering the header/footer information each time they print. Format 110 supports Document preview, widow/orphan control, page numbering, comments, chaining, and merging. It also supports the HP ThinkJet and HP82905B.

THE FORMATTER DOES IT BETTER THAN MEMOMAKER

The Formatter is a variation of the Unix-style, NRoff text formatter. What it doesn't give you in friendly user interface, it easily makes up for with raw power. The Formatter operates from the DOS command prompt. You can direct its output to the screen (for document preview), the printer, or another file. It takes some time to get used to this processor, but once you've mastered it, you can do just about anything.

The Formatter (See review in the Nov./Dec. 1986 issue) fills, automatically hyphenates, and justifies your text. It provides widow and orphan control, headers and footers, document merge, automatic page numbering, paragraph numbering, several different paragraph styles, and table of contents. It supports your built-in printer enhancements.

Since the product is very technical, most of the commands are implemented in 'dot' commands or macros. It is possible to extend the power of The Formatter by writing your own macros. You can, for example, define your own special paragraph style or index.

HPRINT

A review of Paul Grimmer's HPrint follows this article.

MEMOMAKER TEXT PROCESSORS: AT A GLANCE

PrinterTalk
- Easy to customize to any printer
- On-line help
- Typewriter Mode (Including enhancements)
- Two Versions—complete and abridged
- Built-in codes for HP Printers, including the LaserJet
- Automatic page numbering
- Substitute any sequence of characters to two characters

Format110
- Single line headers & footers
- Document Preview
- Widow/Orphan control
- Automatic page numbering
- Turbo Pascal source code
- DOS system commands available from within program
- Margin control
- Comments
- Uses WordStar-like 'dot' commands for printer control
- Document chain/merge

HPrint
- Change print colors on ThinkJet & QuietJet
- Single-line headers & footers
- Automatic page numbering
- SKETCH-style graphics support—merged with text
- Re-definable character sets (with HPRUTIL.COM)
- Time/Date formats
- Mailmerge
- Italics, graphics character set on the ThinkJet
- Comments
- HP-IL printer support (with TJIL.COM)—change printer-mode dip switches like Centronics/Serial version
- Line concatenation
- Sub/Superscripts

The Formatter
- Fills and Justifies Text
- Supports nearly all printers
- Automatic hyphenation
- Document Preview
- Macro Language—define your own styles and commands
- Subset of NRoff word processor
- Automatic paragraph numbering
- Automatic Table of Contents
- Document chaining and merge
- Widow/Orphan control

Common Features of Formatters/Text Enhancers
- Multiple-character fonts within a document
- Page numbering
- Margin, line spacing control
- Directly embedded 'dot' or '@' commands

HPrint: Mingling Text and Graphics

HPrint is an exciting new text enhancer from Paul Grimmer of Southern Software specifically designed to complement MemoMaker. You can easily mingle text and Sketch graphics on the same page, produce italics with the ThinkJet, and print with your own character set. HPrint supports the ThinkJet, QuietJet, and LaserJet printers, and runs on the Portable, Portable PLUS, and the IBM PC.

THE PERSONALITY OF HPRINT

HPrint adds a touch of class to your (otherwise boring) MemoMaker text files. To use the program, you must embed special HPrint control codes (known as '@' commands) directly within the text file. You can specify headers, footers, subscripts, superscripts, comments, line spacing, paragraph alignment, enhancement mode, page breaks, font changes, merge, and graphics files.

One interesting feature of HPrint is its ability to concatenate (connect in a chain) lines of text while in the compressed pitch mode. This overcomes the eighty-column limitation of MemoMaker. Any line of text beginning with the '@[' code will be connected to the next line. HPrint adds a space to each line to keep the words from running into each other.

HPrint's headers can be right or left justified, or centered. You can include the page number in the footer. HPrint fully supports alternating headers and footers for even/odd pages.

Shelp

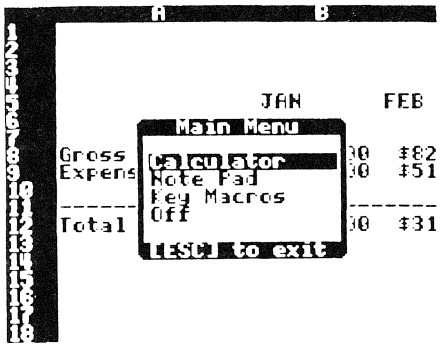
Instant Access Pop-ups for the Portable Plus: Calculator • notepad • macros • and more

Now available on **ROM Backup** for the Portable Plus for an additional $55 (See ROM Backup ad in this issue.)

"A great, easy-to-use productivity booster. If there's one program every Portable Plus owner should have, it's Shelp."—Hal Goldstein, Publisher, The Portable Paper

It's a program called **Shelp** *(shell + help)*, and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl] [Shift] [Extend char] and up pops the Shelp menu, right in the middle of your application (Lotus in this example):



The menu gives you 4 choices: Calculator, Notepad, Key Macros, and Off.

Choose **Calculator** and get a 4-function calculator that works just like a pocket calculator with memory. You can:
- save results in ten different storage registers and retrieve them again with two quick keystrokes
- "paste" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit to your application, and then recall the notepad whenever you want.

No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!

Choose **Key Macros** and you can assign "strips" of up to 31 typewriter characters to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

Example: If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the cursor to "U" in the Keyboard Macros menu and type "United States."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!

Choose **Off** and your Portable Plus turns off without having to return to P.A.M., and without having to save your application file. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Salo, the former HP engineer who authored MemoMaker on the original HP Portable.

Shelp . . . . . $55 ***($49.95 for Portable Paper subscribers)***

60-day no-risk trial: If, after 60 days you are dissatisfied with this product for any reason, you may return it for a full refund. **To order,** use the postage-paid form at the back of this issue, or send check or credit card number to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 515/472-6330

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EXCLUSIVELY HPRINT

If you're using a LaserJet printer, it's possible to print the text or graphics in the normal "portrait" mode or in the sideways "landscape" mode. ThinkJet and QuietJet users can change between four different color print heads. Even though HPrint doesn't actually know what color you're using, this is an effective solution to the problem of stopping and restarting the printer in the middle of the page for a print head change.

HPrint supports mailmerge or the insertion of up to forty strings in your text file. It is perfect for creating form letters and labels for mass mailings. These fields are specified with the '@Mn' code, and are replaced by HPrint when printing occurs. To use mailmerge, create a small database file consisting of fields separated by commas, and then place the corresponding merge fields in your document. HPrint can also automatically insert the date or time in your text.

USING HPRINT

I was impressed with the flexibility and versatility of HPrint. I created a MemoMaker document with a graphics image accompanying a text column. You can use any font, except subscript and superscript, in the same line as a graphics image.

There were several minor annoyances. Unlike Printertalk, HPrint doesn't give you the choice of how many spaces to substitute for the '@nn' codes. If you don't mind justifying your text, extending the margins, and then imbedding the control codes, you're fine. If you imbed the codes and then justify, you'll find your right margin is uneven. It also takes a while to get used to the subscript and superscript support. But prior to HPrint, no such support was available.

Last but not least, the EXIT command is F1, not the customary F8. I have on occasion saved the configuration file instead of exiting the program.

EXTENDING HPRINT

Several utilities accompany HPrint on the distribution disk. TJIL.COM allows you to change the ThinkJet printer's configuration "switches". You can change the printer modes and the standard character set.

You can also redefine your printer's character set with HPRUTIL.COM, change the characters, or even create new ones with its "bit" editor. For example, you can probably create a Kanji or Greek character set for the ThinkJet. In addition, it's possible to test the printer's ink ports, renumber characters in a file, and merge character files.

A complete italic character set comes with HPrint. This allows you to print parts of your MemoMaker file in italic.

CONCLUSIONS

It should be quite obvious that HPrint is a relatively comprehensive text enhancer that extends the usefulness of not only MemoMaker, but the ThinkJet and QuietJet printer as well. It has great potential and is worthy of serious consideration if you're looking for a good text enhancer.

Through the Looking Glass

By Ed Keefe

"Controlling Your Portable's Screen"

by Ed Keefe

[Ed—In the last issue, the **pam.env** *variable "COMSPEC" was inadvertently put in lower case in the examples; it needs to be in upper case. The case of letters in escape sequences (described in this article) is also important. This month's article was written and tested by Ed Keefe on an HP110. Some of his examples do not work on the Portable Plus. Please consult the Portable Plus technical reference manual.]*

ESCAPE INTO THE LOOKING GLASS

This time we'll take a close look at how to control our "looking glass," the display screen of the HP Portables. By "to control," we mean to control what goes where on the screen. We'll make heavy use of the **escape** character (ASCII #27) to redefine the function keys.

GETTING ANTSY PRIOR TO ANSI.SYS

In the early days of microcomputing, there was no uniform way to control the screen. Some programming languages used their own methods to do such simple things as clear the screen. Others did not even have a CLS ("clear screen") command. The situation quickly became anarchic. Programmers were left to their own devices; ordinary users were left to their own confusion.

The American National Standards Institute (ANSI) stepped in and created a set of uniform commands which all computers could use. These standard commands allowed a program to move the cursor around the screen, to clear the screen, to turn on reverse video, and so on.

Then along came the MS-DOS operating system. It did not use the ANSI standard commands. However, Microsoft, the author of MS-DOS, included the ANSI.SYS file on the DOS disk to let users work with ANSI commands.

If you are familiar with IBM PC compatible computers, you have probably seen the file name ANSI.SYS. You may have wondered what it does. Even if you are actually using ANSI.SYS—which you would have installed by adding the line **DEVICE = ANSI.SYS** to the CONFIG.SYS file—you may still wonder what it does.

WHAT ANSI.SYS DOES

ANSI.SYS is a computer program which acts like a command filter or interceptor. Technical writers often refer to ANSI.SYS as a "device driver." You must install it on most computers, but never on your HP Portable; it's already an integral part of the Portable's operating system.

(Inveterate experimenters: do NOT try to install ANSI.SYS on the HP Portables. Bad things will happen. However, if you must, you should know that **Extend-Shift-CTRL-Stop** regains control of the computer. You can then delete the **DEVICE = ANSI.SYS** line from the CONFIG.SYS file.)

To see how the Portable's built-in version of ANSI.SYS works, try the following experiment.

Put your Portable in DOS mode and, at the A> prompt, type in the command **PROMPT Hi, there!** Put a couple of blank spaces at the end of the line and then press the Return key. You have just changed the PROMPT command. However, this part of the experiment does not use the ANSI screen program. The operating system just substituted the text string "Hi, there!" for the default DOS prompt "A>."

Now let's add another string to this prompt. This time type in **PROMPT $e[5;10H Hi, there!** Press the **Return** key, then type the command **CLS** and press the **Return** key again. The "Hi, there!" prompt appears 5 lines down and 10 spaces over from the upper left corner of the screen.

In this case, the ANSI device driver intercepts the $e[5;10H string. ANSI knows that **$e** represents the Escape character (ASCII character #27), and that what follows is not an ordinary string of text, but a command. So it moves the cursor to row 5, column 10 and displays "Hi,there!".

To restore the default prompt, type in **set prompt=** and press return. Remember this for later.

Now you know how to get ANSI's attention: just send it an Escape character (**$e**). When followed by the left bracket ([) and some other gibberish, the Escape character becomes an "escape sequence." The PROMPT command is the easiest way to send these escape sequences to the ANSI command interceptor.

INVISIBLE REFERENCES

ANSI.SYS makes it relatively easy for users to redefine their function keys. There are only four pages about this in the HP110 Users' Manual (Appendix D in the HP-110 Users Manual, pages 6-9), and it is hardly mentioned in the DOS Users Manual. Yet it is very handy and easy-to-use.

SO, HOW DO YOU USE THE ANSI TERMINAL PROGRAM?

Before I show you how to make "sentences of escape sequences," let's decipher the code from Appendix D of the HP-110's Users' Manual. We'll look at the Alternate Escape Sequences and then see how HP has extended them. In the following, "ESC" represents the escape character.

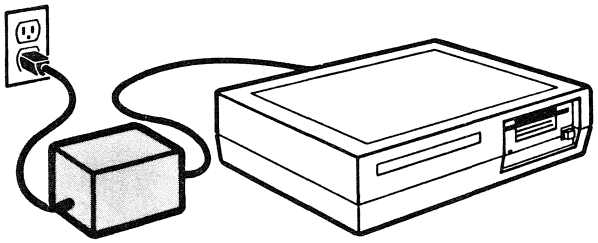
HERE ARE THE CURSOR MOVEMENT COMMANDS

The commands **ESC [#;#H** and **ESC [#;#F** move the cursor to a specific location. "#" represents a number; if it is omitted, the computer assumes you mean "1". Example: **ESC[12;40H** places the cursor on Row 12 Column 40.

ESC[#A moves the cursor up one or more rows without changing the column position. Example: **ESC[5A** (5 up). If the cursor starts at Row 12 Column 40, it moves to Row 7 Column 40. Again, the default value for # is 1.

ESC[#B moves the cursor down one or more rows without changing the column position. Example: **ESC[8B** (8 down). If the cursor starts at Row 7 Column 40, it moves to Row 15 Column 40.

THE HP9114 EMPOWERER



If you've been frustrated trying to use your HP9114 external disk drive only to have the battery quit before you've finished your work, then you know the problem. Now you need the solution.

THE PROBLEM:

The charge on your HP9114 battery doesn't last long enough for you to do all you'd like to. For that matter, in some cases it doesn't last long enough to do *half* of what you'd like to.

According to Hewlett-Packard, you get up to 40 minutes of continuous usage before the battery dies. We've never gotten more than 20. Just formatting disks, transferring files or running disk intensive software and getting it to work can be a major triumph.

Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

WE HAVE THE SOLUTION:

The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? **At *Personalized Software* we have a better solution—2, in fact. Either will solve the problem.**

SOLUTION 1: This is a special power supply. It will allow your HP9114 disk drive to run forever. Just remove the battery pack, plug Solution 1 into the open slot and into your wall outlet. It's that easy! And lets you run your HP9114 to your heart's content. It costs $129 if you're a *Portable Paper* subscriber, $145 if you're not. SOLUTION 2: A power supply *and* battery pack. Solution 2 includes Solution 1 and a modified HP battery pack you can substitute for yours.

Our special battery pack lets your Portable run directly off your wall outlet. You can plug in the regular HP charger at the same time, so your battery pack always stays completely charged. Solution 2 sells for $199 to Portable Paper subscribers; otherwise it's $225. Both solutions are custom-made. Both solve the HP9114 battery problem. And both will let you finish your work.

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ESC[#C moves the cursor forward one or more columns without changing the Row position. Example: **ESC[6C** moves the cursor forward 6 columns.

ESC[#D moves the cursor backward one or more columns without changing the Row position. Example: **ESC[10D** moves the cursor 10 columns to the left.

ESC[S saves the current cursor position in memory. After using this command, you may use any or all of the cursor movement codes above. If you are finished and want to return to your original position, use **ESC[U**.

SCREEN BLANKING OR ERASING COMMANDS

ESC[2J erases (clears) the screen and places the cursor in the Home Position. **ESC[1J** erases the screen from the top line and first column. (I have not detected the difference between these two commands.)

ESC[ØJ erases everything from the current cursor position down to the bottom of the screen. Thus, if you move the cursor to row 8 column 40 and then use this sequence, the right half of line 8 and the lines from row 9 to the bottom of the screen are erased.

ESC[ØK erases (clears) the characters from the current cursor position to the end of the line (cursor position included).

DOS SCREEN ATTRIBUTES

ESC[#m. All of these commands have the same form. The only thing that changes is the value of #. These sequences effect the "screen attributes": blinking and inverse video (white-on-black rather than black-on-white).

On a monochrome display like the one on the HP Portable, here is what different values of # do: Ø turns All attributes off (Normal White on Black); 5 turns the blinking attribute ON; and 7 turns Inverse Video ON.

On other monochrome displays, 1 turns Bold ON (High intensity), and 4 turns Underscore ON.

SOME HP EXTENSIONS TO THE ANSI ESCAPE SEQUENCES

For lack of a better description, I call the following sequences "text processing sequences."

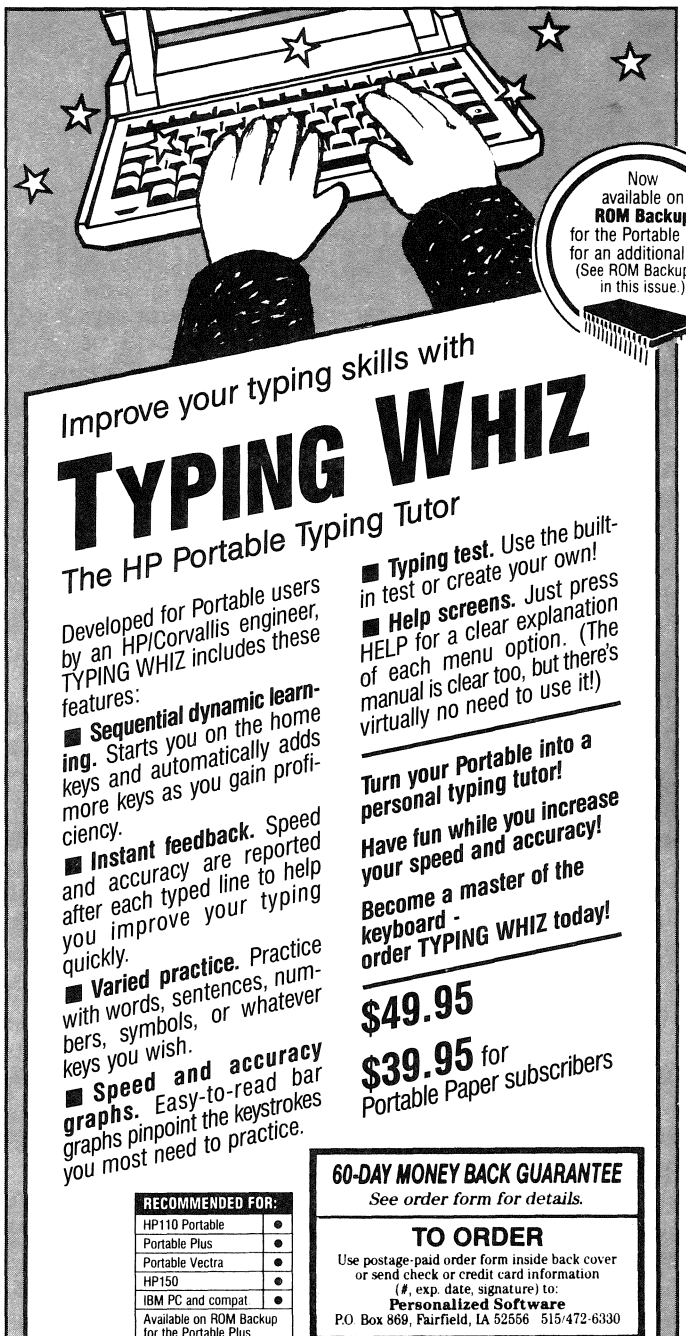
ESC[11m activates the Alternate character set (described beginning on page D-1 in the HP 110 Users' Manual). Example: **PROMPT $e[11m** activates the Alternate character set and causes the prompt to disappear. To restore the default prompt, type **set prompt=** and press the **Return** key.

Now that the Alternate character set is active, type the command **PROMPT=CTRL-B**. (Press and hold the **CTRL** key while tapping the **B** key to enter CTRL-B.) Now press the **Return** key and you should have a smiling face for a DOS prompt. (This works for the HP110 only.)

ESC[10m reactivates the HP character set. Example: type in **PROMPT $e[10m**, press return, and then restore the default prompt. You no longer have to poke around in PAM's System Configuration menu to change from one character font to another.

ESC[=10h activates the graphics mode of the computer. This one is best left alone. It blows away the screen on the HP 110 and requires you to reset the computer with the contrast key.

Using a prompt command with the **ESC[=8h** sequence has no apparent effect. It is supposed to restore the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Typing Whiz is one of the better typing programs on the market and is priced competitively. If you want to learn or improve your typing, buy Typing Whiz. Typing Whiz is on my highly recommended list.
—Dave Mark, L.A. Scrug Notes, newsletter.

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80 X 16 alpha display mode. Since this mode is already in effect, nothing changes.

ESC[=7h and **ESC[?7l** supposedly toggle between "text wrap at the end of a line" and "no text wrap." The mode in effect is "text wrap." Honestly, I have never found these commands to work as expected. About all they do is clear the screen and cause the prompt to disappear.

ESC[P, when sent to the ANSI driver, deletes a character at the cursor's position.

ESC[M deletes a whole line from the display.

ESC[L inserts a blank line at the cursor's current position.

ESC[@ inserts a character at the cursor position.

THE HP TERMINAL ESCAPE SEQUENCES

Pages D-6 and D-7 of the HP110 Users' Manual list the HP Terminal Escape Sequences. One key sentence says that all escape sequences are active at all times...they are not affected by the mode setting. This means that you may mix both kinds of escape sequences and they will work.

There is just a slight difference in how HP designed its escape sequences. You will notice that HP does not use the left bracket ([). Sometimes it will use the ampersand (&) instead. Also, most of the HP cursor movement sequences do not support repeater numbers.

Thus, both HP and the Alternate "cursor up" sequences use ESC A, but the HP version does not allow for any # in the escape code.

HERE ARE THE HP CURSOR MOVEMENT SEQUENCES

ESC A moves the cursor up one row while keeping it in the same column. If you want to move up more than one row, use **ESC A ESC A**, etc.

ESC B moves the cursor down one row while keeping it in the same column.

ESC C moves the cursor forward one space. This has the same effect as pressing the right arrow key.

ESC D moves the cursor backward one space. This is not a destructive backspace. It has the same effect as pressing the left arrow key.

ESC F moves the cursor to the lower left corner of the display. This is called the Home Down sequence in the Manual.

ESC H or **ESC h** is the Home Up command. It moves the cursor to the upper left corner of the display.

ESC I and **ESC i** tell the ANSI driver to generate, respectively, a forward tab and a backward tab. If you put eight $eI commands in a PROMPT command and then press Return, the cursor will come to rest in column 64 of the screen. (Remember that you can restore the default prompt with **set prompt=.**)

ESC S rolls the screen up and**ESC T** rolls the screen down.

ESC U has the same effect as pressing the Extend Down Arrow keys; it goes to the Next Page of the screen. **ESC V** has the same effect as pressing the Extend Up Arrow keys; it moves you to the previous screen.

The following sequences allow you to use repeater numbers to move the cursor a number of rows and columns with just one command.

ESC &a#x#Y and **ESC &a#y#X** are very similar commands which move the cursor to a new position relative to its current position. Example: Assuming that the cursor is on line 5 and 10 spaces from the left edge, then the command **PROMPT $ea6y54X** puts the cursor on line 11, 64 spaces from the left edge.

PROMPT $ea54x6Y does the same thing. You must be careful to keep straight what is x and what is y. Notice that the first letter (x or y) is in lower case. The second letter (X or Y) is in upper case.

ESC &a#X keeps the cursor on the same line and

moves it # spaces to the right. **ESC &a#Y** keeps the cursor in the same column and moves it # lines down.

Although the next four commands look like the last four, they are different. In place of X and Y they use R and C (or the lower case equivalents).

ESC &a#c#R and **ESC &a#r#C** move the cursor to a specific row and column no matter where the cursor is. R stands for Row and C stands for column.

ESC &a#R and **ESC &a#C** move the cursor down the screen or to the right while keeping the cursor in the same column or row.

ESC ' senses the relative cursor position while **ESC a** senses the absolute cursor position.

HP TEXT PROCESSING ESCAPE SEQUENCES

ESC L	inserts a line at the cursor.
ESC M	deletes a line at the cursor position.
ESC P	deletes a character at the cursor.
ESC Q	turns on the insert mode of character entry.
ESC R	turns on the overwrite mode.
ESC &s0	has the same effect as shutting the CAPS key off.
ESC &s1	turns on the CAPSLOCK mode of entry.
ESC *dQ	turns the cursor on.
ESC *dR	turns the cursor off.

If you put ESC *dR in a PROMPT command, both the prompt and the cursor will disappear. Restoring the default prompt will not restore the cursor. Even the trick of pressing the Extend f1 keys does nothing.

HP VERSIONS OF THE SCREEN ATTRIBUTE ESCAPE SEQUENCES

ESC &d@	turns on normal screen display (black-on-white or dark-grey on light-grey)
ESC &dA	causes characters to blink.
ESC &dB	causes characters to appear as white on black.
ESC &dC	produces blinking, white-on-black characters.

ESCAPE SEQUENCE FOR DEFINING THE FUNCTION KEYS

The sequence is **ESC &f0a#k#d#LSTRING** (up to 16 characters allowed in LSTRING). Example: Suppose I want to redefine the f6 function key so it displays the message "START UP" and activates a batch file called AUTOEXEC.BAT. Here is how to set up the key definition and why.

PROMPT $e&f0a6k16d9L.....START.UPautoexec

(The dots represent spaces.)

All the key definitions start with the sequence **ESC&f0a**. Then comes the number of the key (6 for this example) followed by "k". Next comes the number of characters used in the display (16 here) followed by the letter "d".

Since I wanted the phrase "START UP" to appear in the lower part of the function key window, I assumed the top part of the little window contained 8 blank spaces and the lower part contained 8 characters. Next I counted the number of words in the "action word". In this case "autoexec" has 8 characters. However, I want to add a carriage return code at the end of the action word. Normally, if I were to key in the word AUTOEXEC at the DOS prompt, I would have to press the carriage return key to send the AUTOEXEC word to the command processor. So I put a "9" followed by an "L" in the sequence.

Finally, I entered the full display string followed immediately by the word "autoexec" and a carriage return. I generated the carriage return character by holding the CTRL key and pressing the M key. The prompt disappeared. However, the words START UP appeared in the window for function key 6. When I pressed the f6 key, my AUTOEXEC.BAT file ran.

Ed Keefe is an author, programmer, and Computer Science instructor. He is the president of The FastAid Co., 314 SW Logan, Ankeny, IA 50021. Ed's CompuServe I.D. is 73277,1064.

[Ed—If you're interested in learning more about ANSI escape sequences, send a formatted 3 1/2" disk and a self-addressed, stamped envelope to Personalized Software, P.O. Box 869, Fairfield, IA 52556. Ask for "TLG11 Offer" and we will send you a sample file containing sequences that spin letters on the screen (110 or Plus) and scroll a fancy border (110 only), along with some more clever information from Ed Keefe about programming ANSI escape sequences.]

by The Wizard, Cliff Looyenga

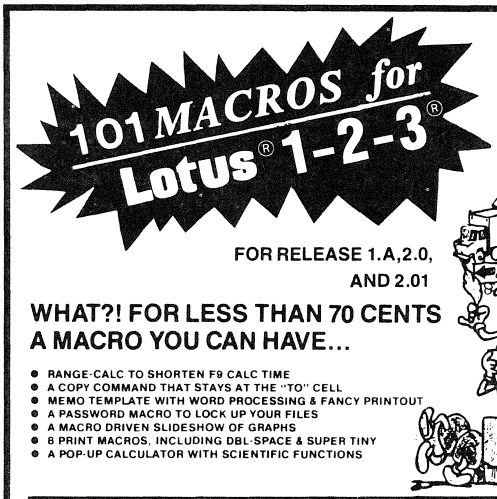
Wordstar 4.0

I got a call the other day from a friend who had purchased the newly released WordStar 4.0. He wanted to know if I'd help him get it running on a Portable Plus. I said, "Sure, bring it up." So up he came with 1.8 megabytes worth of WordStar. Ten minutes later we had it up and running on the Portable Plus. If you like WordStar, you'll just love WordStar 4.0.

So what's so great about WordStar 4.0? There are over 125 new features, including undo, keyboard macros, line/box drawing, improved printer support, multi-line headers and footers, on-screen boldface and underline, subdirectory support, improved spelling correction, and file compatibility with the older versions of WordStar. It prints significantly faster than the original WordStar and more easily generates indices and table of contents than previous versions do.

How much of it doesn't work on the Portable Plus? I haven't checked everything out yet, but I've found that the thesaurus and the tutor don't work. (The Thesaurus that comes with WordStar is actually the memory-resident program WordFinder and does not work on the Plus.) Also, none of the function keys or arrow keys work unless you run WordStar from **pcrun**. **Pcrun** is a program that fixes a bug in interrupt 16h on the Portable Plus. (I understand that it will be included on the 1988 *The Portable Paper* subscriber's disk and it is included on the WordStar disk that Personalized Software sells.) WordStar will work without **pcrun**, but you must use control keys to issue commands.

Those who have minimum RAM in a Portable Plus will be pinched for space. WordStar takes up 78k disk space, and its message file takes up 43k. You can access all the other overlays (files) directly off the floppy (in fact you can



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also access the message file off the floppy). I have my memory set to 256k and that is sufficient. The spelling checker takes 23K and uses two dictionaries that take up 302K.

To install WordStar 4.0 on the Portable Plus do the following:

- Copy the files **ws.exe** and **wsmsgs.ovr** off the program disk to your A drive.
- Insert the install disk and type **c:**.
- Run the configuration program by typing **wschange**. This program allows you to configure lots and lots of stuff in WordStar.

Portable Plus users are particularly interested in the display driver and the valid disk drives.

- Select the display driver by typing: **AAABXX**.
- Set the valid disk drives by typing: **CAA**. You will be prompted for each of the valid drives you have. If you want to be able to use mailmerge or the speller, set C to be your primary drive. This will cause WordStar to look to C for its overlay files.
- Press **X** till the WSCHANGE program ends.

To run WordStar just type: **pcrun ws**. If you don't have pcrun, you can run it by just typing **ws**. Be sure the program disk is in your C drive. By the way, WordStar will run without its overlay files, but you obviously won't have the features that are in the overlays (including printing).

One reason I really like WordStar is that it is key stroke compatible with Turbo Pascal. This means I don't have to constantly learn new key strokes for cursor movement, etc., every time I program or do word processing.

I should comment on printing. First, the patch areas are larger. This means that you can load the patch areas with the escape sequences for the ThinkJet (the old WordStar patch area was too small for the ThinkJets escape sequences). The default printer driver, **draft**, works fine with the ThinkJet; it produces bold facing, underlining, and strike-through in draft mode.

The printer overlay takes up about 141k of disk space. You can, however, tell the **wschange** program to shrink that file and just keep the drivers in it that you will use. For example, when I told it to only keep the **draft** printer driver, the resulting file size was only about 3K.

WordStar is a top-class word processor that I recommend highly... so far. Hal tells me that if you purchase WordStar from Personalized Software, they will include an HP formatted, 3 1/2 inch disk fully customized for The Portable Plus and the ThinkJet.

IBM Compatibility Revisited

I am often asked: "Is there any way to know whether an IBM PC program will work on the Portable Plus other than just trying it?"

There is really no way to know for sure, but the following information might help.

When a programmer writes software for an IBM PC, he has certain speed and feature goals. These goals determine how the software is written and ultimately how IBM-specific the program ends up.

IBM-specific code is most always related to I/O (input and output). An example of input is how keyboard keys are processed. Examples of output include how the program puts characters or drawings on the screen and how the program sends information to the serial port.

There are basically four layers to which a programmer can write his I/O routines. The top layer makes no assumptions about the IBM PC hardware except that a version of MSDOS is running. The bottom layer skips all software and writes directly to IBM hardware. The higher the level, the greater the chance the program will work on The Portables. (HP110 owners have a second I/O problem. Programs that assume the screen has 25 lines usually do not function well on the HP110).

Below I've listed these four layers with example programs for each. Also, in the description you will find hints how to tell whether a program falls into that category, and whether programs of that nature will run on The Portables.

TOP LAYER: USE DOS FUNCTIONS.
Description: Programs that use this type of I/O do not do any cursor positioning or alter screen attributes. They do not use function keys or cursor keys. These programs run on both Portables.

Examples: Rightwriter, ARC utility, many Dos Tools, Format.

LAYER 2: USE DOS FUNCTIONS WITH ANSI ESCAPE SEQUENCES.
Description: Can do screen attributes and cursor positioning. Also can read function and cursor keys. Screen I/O tends to be relatively slow. Programs in this mode of operation require installation of **ansi.sys** if run on an IBM PC. (Many of the **ansi.sys** standards are already built into The Portables' implementation of DOS. See this issue's Looking Glass column for an explanation of this layer.)

Programs are not usually written to use escape sequences exclusively; they also may use BIOS (layer 3) interrupts.

Programs of this type will most likely work on both Portables.

Examples: Norton utilities using driver 2, Turbo Pascal.

LAYER 3: USE BIOS INTERRUPTS
Description: Programs that write to BIOS interrupts are faster since they bypass the higher-level DOS layers. They write directly to BIOS interrupts that talk directly to the IBM PC hardware. Some of these interrupts have been implemented on The Portable Plus but not the Portable. Programs that use these interrupts normally do not use any graphics and tend to update the screen quite quickly.

Cursor keys and function keys are often used. Many software packages can be configured to use these interrupts.

Programs of this type often run on the Portable Plus in alternate mode, but will not run on the HP110.

Examples: Norton Utilities using driver 1, XTREE, WordStar 4.0, Word Perfect.

NOTE: The Portable Plus has a bug in the interrupt that reads a key from the keyboard (interrupt 16). This causes some programs to appear to hang. The program **pcrun** fixes most of the problems with this interrupt. Since many of these interrupts are not implemented on the Portable Plus, many programs are unable to run. Many products written in the IBM PC version of Turbo Pascal will not run because of a routine that checks the clock speed through a BIOS interrupt.

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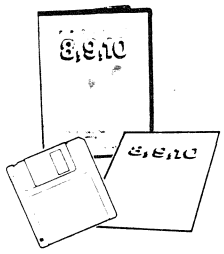

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BOTTOM LAYER: COMMUNICATE DIRECTLY WITH THE IBM HARDWARE
Description: Software of this type will not run on either portable. These programs have extremely fast display updating and often use graphics.

Examples: Flight Simulator, Norton Utilities using driver 0, desktop publishing, MS Windows, most games.

Cliff Looyenga provides technical support for HP PCs and HP3000s, and in those circles he is known as "The Wizard". He has developed a number of Portable and Portable PLUS utilities. You can reach Cliff, via CompuServe, ID: 75106,2130.

(110% continued from page 10)

Out Of Environment Space?

By Richard Burmeister

If you've ever tried to add an environment variable to DOS (e.g. **set edconfig=a:** for The Editor), you may have received the error message "Out of environment space". You may also get this message if you have a Plus with a lot of ROM chips. This article explains what the message means and how to fix it. (Special thanks to Gary Goodman for an article he recently submitted, which contained the basic idea for the fix on The Portable Plus).

DOS ENVIRONMENT SPACE
MS-DOS maintains a table which contains some very useful information, such as where it should look for the

Attention users of the HP41, 71, 75, and series 80 computers:

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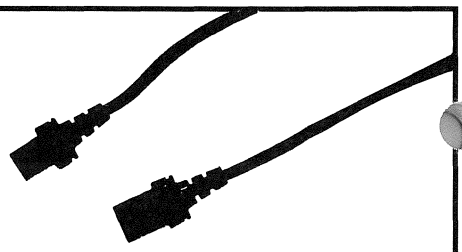

Hewlett-Packard's HP-IL interface lets you transfer data from certain HP-IL devices to certain other HP-IL devices—for example, from hand-held computers to printers and disk drives, or from your HP Portable to an IBM PC.

Unfortunately, the HP-IL interface does not allow all possible combinations; notably missing is the ability to transfer data from HP hand-held computers to MS-DOS computers like the Portables, the HP150, and the IBM PC.

Now all that is changed, thanks to a software program called LINK.

LINK lets you transfer data from *any* HP-IL device to any other HP-IL device. This means, for example:

- You can transfer data both ways between an HP41, 71, 75, or series 80 computer and your Portable, HP150, or IBM PC.* This gives your hand-held direct access to your MS-DOS machine's computational power and unlimited storage capability.
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- You can use your Portable or desktop computer's video screen to display entries made on your hand-held.
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*provided your 150 or PC is equipped with an HP-IL interface card available from Hewlett-Packard.

LINK was written by Paul Grimmer, author of SideWinder, the sideways printing program, and Sketch, the freeform graphics program, both for the HP Portables.

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operating system (**command.com**) when you start the computer. On the Portables, PAM makes its own copy of this table. To find out what's in this table, from DOS, type in **set > the.env**. Then edit THE.ENV with your favorite editor.

Mine has these three lines:

```
COMSPEC=B:\BIN\COMMAND.COM
path=a:\;b:\memo-tm;b:\hp82863k;b:\editor;
     b:\turbo;b:\sw_shelp;b-:\bin;b:\bin\etc
PROMPT=$t$h$h$h$h$h$h [$p]: $s
```

On the Portables, PAM automatically looks to the B drive for ROM software. PAM automatically adds entries to the **path** variable so it can execute ROM-based applications (e.g. **b:\editor**). (The **path** command tells The Portables in what subdirectories to look for application programs and batch files.)

PAM sets a limit to the amount of space the environment table can occupy. The limit on the Portable Plus is 255 bytes or the number of bytes needed when PAM starts, whichever is smaller. For example, my Plus starts with 142 bytes. When I try to add a new environment variable by **set abc=def**, I get the message "Out of environment space".

ENLARGING THE ENVIRONMENT SPACE ON THE PLUS

When PAM starts, it looks for the file A:\PAM.ENV. If this file exists, its contents are read into the environment space and passed on to other programs (e.g. DOS).

On the Plus, the size of PAM.ENV determines the environment space available. Therefore, to make extra space in the environment, just add a dummy variable to this file as follows:

1. From DOS, enter **set > pam.env**
2. Edit PAM.ENV, adding the line

```
dummy=abcdefghijklmnopqrs
```

3. Return to PAM.

This will add 25 bytes to the environment space.

WARNING: The first line of PAM.ENV, **COMSPEC=B:\BIN\COMMAND.COM**, must never be changed!

Anytime you want to add a new environment variable, just get rid of **dummy** to free up 25 bytes, then add the variable.

For example, you might use the following batch file to start The Editor on the Portable Plus:

```
set dummy=
set edconfig=a:\
edplus %1
set edconfig=
set dummy=abcdefghijklmnopqrs
```

Note that **dummy** is reset to its previous value, so the next time PAM starts, the environment space contains the extra 25 bytes.

HP110 USERS

On the HP110, you cannot increase the environment space by following the above strategy. However, you can gain space by shortening the prompt. Use this batch file:

```
set prompt=$p$g
set edconfig=a:\
ed110 %1
set edconfig=
set prompt=
    $d$h$h$h$h$h$h$h$h$h$t$h$h$h$h$h$h [$p]: $s
```

The last line resets the prompt to the default on the HP110. You can use any prompt you like here.

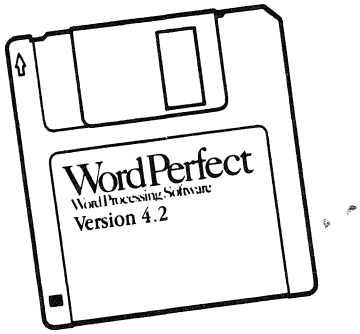
WordPerfect customized for the Portable Plus and HP150

WordPerfect. It's the best-selling word processor for the IBM PC. According to many reviewers, it's the best word processor on the market.

WordPerfect is a word-processing powerhouse. Its advanced features include creation of text in columns, automatic footnote formatting and numbering, mail merging, and text sorting.

Now there are versions of WordPerfect for the HP Portable Plus and the HP150 touchscreen. In either case, it's the full-blown Version 4.2, complete with comprehensive thesaurus and 115,000-word spelling checker.

Not only can you use WordPerfect on your HP computer, but if you already have WordPerfect for your PC, you now can transfer files back and forth between your PC and your Portable Plus or HP150. The same WordPerfect features and commands work on all three machines. (The function key layout is different on the HP machines, but this is a simple matter for most PC users to adjust to.)



WordPerfect's powerful yet easy-to-use features have made it a best-seller. It's perfect for the Portable Plus or the HP150... and it just may be perfect for you. Order a copy today and use it at our risk. If, within 60 days, you are dissatisfied for any reason, simply return it for a full refund.

WordPerfect . . . . . $495.
$299 for Portable Paper subscribers.

IMPORTANT: Be sure to specify whether you want the Portable Plus version or the HP150 version.

Note to Portable Plus users: As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM to allow space for the basic WordPerfect program and still leave room for other files on your electronic disk. To fit *everything* on your A drive, you'll need an additional 340K for the spelling checker, and 360K for the thesaurus. (The speller and thesaurus can be run from your HP9114 if you wish.)

Our version of WordPerfect includes an 8-page supplement to the manual that tells you how to run WordPerfect on the Portable Plus.

Note to HP150 users: By special arrangement with WordPerfect Corporation, our version of WordPerfect includes the standard 5¼" disk plus our supplementary *double-sided* 3½" disk that customizes the program for HP150 users. The disk includes a special utility that allows WordPerfect to run on the 150. (If your HP150 requires *single-sided* disks and also has a hard disk drive, a version of WordPerfect may soon be available that will run on your machine. Please contact us for up-to-date information.)

RECOMMENDED FOR:	
HP110 Portable	
Portable Plus	●
Portable Vectra	●
HP150	●
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(letters continuted from page 38)
save results to an ASCII file for transfer into another program.

You may order the product from Personalized Software if you wish (subscriber price $159). We will include an additional 3 1/2" HP formatted disk.]

Time Manager: "The Final Solution"

The Portable Paper has offered several solutions concerning the 100-name limit to the **tm.nam** file in Time Manager. The approach I describe here seems simpler and more direct and permits you to maintain any number of phone lists.

I give individual phone lists specific names. For example, I maintain phone lists named **personal.nam, business.nam, academia.nam** and **bbslist.nam**. The **.nam** extension is not essential but makes the list easier to identify in a directory.

I write batch files for each of the phone lists. Here is the batch file **business.bat**:

```
echo off
ren business.nam tm.nam
tm
ren tm.nam business.nam
echo on
```

To access the **business.nam** phone list, type **business** at the DOS command prompt. The batch file renames **business.nam** as **tm.nam**, starts Time Manager, and then converts **tm.nam** when leaving Time Manager (complete with all additions and changes). You cannot switch phone lists while in Time Manager. You must exit the program and re-enter it using the name of the desired phone list.

You can create a new phone list by going directly into Time Manager and adding names to the Name and Address List. This list will initially be empty—at least, it should be empty if you use the approach described here—because there shouldn't be an existing **tm.nam** file on the A drive. You can then rename the **tm.nam** file that is created after exiting Time Manager and write a new batch file.

To access phone lists from the PAM menu, simply add an entry to **pam.mnu** for each phone list.

Joseph J. Lischka, Ft. Lewis, WA

Switching To Alternate Mode

Here is a helpful batch file for the Portable Plus when using processors that require alternate console/keyboard mode.

```
echo ^[&k1\
%1
echo ^[&k0\
```

You must create this three-line file using the Editor, Edlin, the DOS **copy con** command (see *Portable Paper* vol 1, number 1, page 6), or any program that can create the **escape** character. (Plus MemoMaker does not create a true **escape** character). The **^[** in the two **echo** lines represents and should be replaced by the **escape** character. Save the three-liner to a file, say, **alt.bat**.

The first line changes the Plus into Alternate mode. The second line runs whatever program you have chosen. The third line changes the Plus back to HP mode.

For example, to run the main Norton Utilities program on the Plus, you could type **alt nu**.

The benefit is that you don't have to go into PAM's system configuration to change modes back and forth.

The July/August 1987 issue of *The Portable Paper* has to be the best yet. I very much enjoyed the technical information on the DOS environment in the last Looking Glass column. Ed Keefe, the article's author, said he didn't know why there were 33 missing bytes. IBM's DOS manual may provide the answer.

It says: "If you have not loaded a program that remains resident (such as MODE, PRINT, GRAPHICS, etc.), DOS expands the environment string area to hold additional strings. If you have loaded a program that remains resident, DOS is unable to expand the environment area beyond 127 bytes. When you load a program that is to remain resident, DOS is unable to expand the environment area beyond that point."

Could it be that that using PAM makes PRINT resident or that PAM itself is resident? *Steve Brown, Holland, Ohio*

Plus Mouse Capabilities

Hal, after reading the reviews in the last two issues of the Portable Paper—by the way, it's too bad something just as fine doesn't exist for the 150! - I've decided to order the Logitech mouse system for the Portable Plus. Then it dawned on me that MSWord, at least the way it's used on compatibles, supports the mouse. Question: how, if at all, are the two mouse systems reviewed in the Portable Paper supported by MSWord on the Portable Plus? In the same vein: how about the HP products like ECM, which support mice when running on other hardware? Thanks.

Richard R. Liu, Basel, Switzerland

[Hal—The mouse works on the Portable Plus with MSWord and ECM as a replacement for the cursor keys. The MSWord and ECM files that run on the Portable Plus have no built-in mouse capability. If the mouse was directly supported by MSWord, you could use the mouse to set tabs, make menu selections, open/close windows, etc.

Our Logitech and MicroSoft Mouse drivers for the Plus (written by Bill Saltzstein of HP) work on all applications we've tried (except within SHELP). You can slide the mouse on the desk instead of pressing the cursor (arrow) keys located on the top right of the Plus keyboard. (Actually, you can assign any keys to the mouse movement).

In addition, you can assign the mouse buttons (3 for the Logitech Mouse, 2 for the MicroSoft Mouse) to whatever keys you wish. For example, you could assign the 3 Logitech keys to **ESC**, */*, *and* **Return** for Lotus. That way you could traverse any Lotus Menu just using the mouse. We've preconfigured Sketch, Lotus, MemoMaker, PAM, and several other packages for the mouse, although it is simple to do yourself.

Printers, modems, mice, or any other peripherals which use a serial port drain the Portable battery more quickly then normal. However, if you're using a mouse, you can more than likely plug in your Plus to avoid battery drain.]

Some Random Thoughts And Tips

The mostly likely cause of failure is loss of power. Fortunately, the Portable, HP9114, and ThinkJet are all equipped with interchangeable adapters. I keep two of the adapters at the office and take them on out-of-town trips when I use my 9114 disk drive. I keep the other adapter at home. If I'm just taking the Portable out of town, I throw the single adapter in my suitcase. I have extra batteries for my 9114 and my ThinkJet. I do not have batteries for the Portable, though. Personalized Software should think about distributing a replacement battery.

I have used modified Radio Shack Power Supplies to power my HP9114 for over two years without any apparent harm. I think the voltage is a little high but it sure avoids problems caused by low batteries.

I would probably pay HP price for a state-of-the-art model that reads, writes, and formats disks so they are compatible with IBM and Toshiba computers and can read HP format disks. I currently use a Toshiba luggable with hard disk when I travel. I carry my Portable, but I expect my 9114 and printer will spend more time in Houston.

I back up my work on IBM machines. Most of my important data is available in an alternate format and my HP9114 can read IBM format.

If my 9114 crashed and a suitable HP replacement were unavailable, I would consider substituting an IBM PC clone equipped with a 3.5" disk drive.

If my Portable crashed and could not be revived by addition of new power, I would prefer replacing it with a Plus. This is not a cheap option. Another option is to replace it with a used Portable. I understand you have some used machines at quite reasonable prices. The replacement box might not even have a sticky 4 key. A person who cannot be without a Portable for an extended period of time might consider buying a complete back-up system. The cost of a used HP110 is now very low.

You could change to another brand of Portable computer, but I don't think any true Portable person would really like this option. David Hughes, in the last issue of *The Portable Paper*, compared the Portable with some other portable computers. He did not mention how much easier it is to connect the Portable's HP-IL ThinkJet printer than those used with most portable computers.

PC Magazine reviewed laptop computers is its July 21, 1987, issue. They gave the HP Portable a very poor review. I don't think they understand the essence of portable computing. They certainly showed that they don't understand the HP Portable. Be very wary of what the experts say about computers, especially portables.

Ronald Colwell, in his letter on page 4 of last issue, brought up an important point that should be kept alive. Now that our HP110's are getting older, we must find an economical way of handling repair.

There may be an opportunity for an enterprising, computer repair person to set up a Portable exchange program. When your machine dies, he could send you a comparable, rebuilt machine in exchange for your old machine. He could then repair and sell it or use it for parts. I don't know how much such a service would cost. $100? No problem. $200? I would have to look at other options. I think the range for printers and disk drives would be $50-$75.

When my Portable was under warranty, I took it to the HP repair center in Houston. I received excellent service, but it turned out I had a faulty external modem. I also had my disk drive checked, too. Unfortunately, nothing much could be done to cure its hereditary heart condition.

As a last straw, I would consider having HP repair my Portable. This option is most likely prohibitively expensive.

I bet on HP quality and never bought a service contract for my system. I won my bet since I think I can now buy a used machine for less than the cumulative cost of the contract.

Tom Page, Houston, TX

[Corvallis support is working on a formatting program that allows you to use the HP9114 to format IBM 3 1/2" disks. We hope to put the program on the 1988 subscriber's disk.]

HP110/HP110+ USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine also tell us. We will publish this column each issue, keeping it up to date. Write *Local Users Groups, Box 869, Fairfield, IA, 515-472-6330.***California**, *Southern California* We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. *San Diego,* Stephen L. Eyre. 619-452-8530. *San Mateo, Santa Clara Counties, San Francisco Bay Area*, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve., or Michael Felsenstein, 415-564-8279, eve. Herbert L. Hamerslough. D: 415-340-8811, E: 415-323-9618. *Los Altos/Mountain View*, Marge Sutton, D: 415-949-0509. E: 415-948-0627. **Colorado**, *Colorado Springs,* Dan Ritt, 303-528-8080. *Denver,* Call Bob Pressey, 303-777-0326 **Georgia**, *Atlanta,* Call Brian Walsh D:404-394-2500 E: 404-399-6842 **Hawaii**, *Honolulu,* Rodney Y. Fukuya if interested, 808-945-3111. **Indiana**, *Indianapolis,* Bob Glass, 317-638-2326. **Iowa**, *Mid Iowa*, Ed Keefe D: 515-964-6644 E: 515-964-7064. *Southeast Iowa*, Hal Goldstein, 515-472-6330 **Minnesota** *Minneapolis/St. Paul,* John Ferman (612) 822-1372 **Maine**, *Yarmouth,* Every last Tue 6:30, US Route one, Yarmouth, ME 04096, 846-5497 **North Carolina**, *Charlotte and surrounding area*, John Jacob, 704-334-3468. **Texas**, *Houston*, Thomas R. Page, D: 713-759-4259, E: 713-528-7138. **Utah**, *Utah County*, Donna Hoover, D: 378-4421, E: 375-4812. **Washington**, *Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington* , Bob Sandberg. 509-466-4999. *Eastern Washington*, Stephen S. Warner. D: 509-534-1588, E: 509-535-3322. **Washington D.C.**, *Greater Washington D.C. Area,* 8:00 PM, Third Monday of Each Month, Ballston Tower #1, 800 N. Quincy St., Room 519. Call to confirm and to say, Hi. William F. Cross. D:202-696-4112, E:703-845-9508. **Australia**, 8 Avoca St, S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. **England**, Trafalgar House, Grenville Place, Mill Hill, London, NW7 3SA England. Tim Cullis. (01) 959 4359. **Netherlands,** Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands **Spain**, Club de usarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana.

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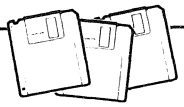

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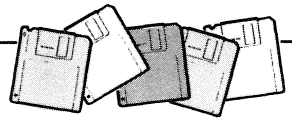

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		2 Year Subscription	99.00[1]	N/A		
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	Typing Whiz (p. 38)		49.95	39.95		
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	WordPerfect (Specify Plus or HP150) (p. 43)		495.00	299.00		
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	WordStar 4.0 (Portable Plus or HP150 only)		495.00	299.00		
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MISC.						

ROM BACKUP p.2	ROM Backup—Product Description (For ordering instructions see page 40.)	Price	Qty	Total

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[2] Available only to subscribers.

[3] Available only to those whose subscriptions include at least one 1987 issue.

[4] The $7.50 includes shipping. Alternatively, you may mail in a formatted disk and a 39¢ self-addressed stamped envelope to receive the software at no charge.

[5] Subscriber price for colored disks (Rainbow or Monochrome Pack) is $39.95 for one set of 10, $35.95 each if total order includes 2 or more sets of 10. Circle price that applies.

[6] Lower price is without cable for connecting to HP Portables. Circle price that applies.

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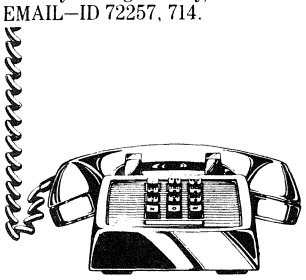

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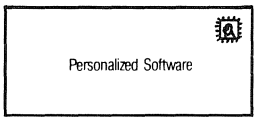
   - Products are next and are alphabetized.
   - The blank lines near the bottom labelled MISC are for you to write in special instructions or to order miscellaneous products not listed on the form.
   - The last section of the order form is for ordering software on ROM backup. See below.



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     - Tape shut and drop in mail.

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To order any of the following products (or others described in The Portable Paper but not listed on the opposite page), simply write the product name and price on one of the blank lines in the MISC section near the bottom of the order form.

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Pertmaster*	695.00	499.00
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PrinterTalk (p. 33)	49.95	44.95
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*Specify whether HP110, Portable Plus, HP150, or IBM PC. Price of Pertmaster Demo applicable to cost of Pertmaster.

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To order any of the following products on ROM Backup, simply write the product name and price on one of the blank lines in the ROM Backup section at the bottom of the order form.

IMPORTANT:

You must own (or order) the disk versions of any products you buy on ROM Backup. See inside front cover for complete information on ROM Backup Service.

	Size of ROM	*Price*
Best of DOS Tools (p. 29)	(Two 64K ROMs) 128K	$129.
The Editor (p. 23)	64K	95.
HPrint	64K	95.
RightWriter (p. 12)	(Two 128K ROMs) 256K	179.
Shelp (p. 35)	32K	55.
Shelp + SideWinder	64K	95.
SideWinder[a] (p. 27)	32K	55.
Sketch (p. 24)	64K	$95
Super ROM (p. 2) (The Editor, Mini PrinterTalk,[b] Format110, Shelp, and SideWinder,[a])	128K	$149.
Turbo Pascal (p. 21)	64K	95.
Typing Whiz (p. 38)	64K	95.
Webster's Spelling Checker (Back cover)	(Two 128K ROMs) 256K	179.

[a] This version of SideWinder does not include any of the SideWinder utilities.

[b] Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk. It is functionally equivalent to PrinterTalk for most applications.

Our Products in Brief

CompuServe Starter Kit

Gets you started on the Electronic Information Service, CompuServe (which includes the HP Forum). Includes $25 worth of free time, complete Users Guide, permanent user ID number and preliminary password, and CompuServe's monthly magazine, Online Today.

Condor 3 and Condor, Jr.

Easy-to-use database programs customized for the the HP Portables. With almost no need to refer to the manual, you can enter data, sort, search, manage files, and print address labels. **Condor, Jr.** runs on the HP110 and its 16-line screen. It allows limited report writing, and is highly memory-efficient: the main program is only 25K, and you add individual 10K programs for each function you wish to use. Condor, Jr. is fully upgradable: all Condor, Jr. files can be used by Condor 3. **Condor 3**, which runs on the Portable Plus and HP150, is considered the fastest database management system available. It is a fully "relational" system, allowing you to select and combine data from two or more files. It includes advanced report generating capabilities, data transfer to and from Lotus 1-2-3 and other applications, and much more.

See P. 29 **DOS Tools: Portable Utilities Disk, Vol 1**

Well over 50 excellent public domain programs that enhance DOS, all tested on The Portables. Documentation has been rewritten for clarity and ease of use, and includes examples, index, and table of contents.

See P. 23 **The Editor/The Formatter** (separate packages)

The Editor: Many features not in MemoMaker, including search/replace, embedded printer codes, up to 255 columns per line. Also does word wrap, right justify. Easy to use. Uses less than 40K. Versions for HP110, Plus, IBM PC, HP150 all on master disk.

The Formatter: Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note: Documentation is in draft form: no technical support available.)

See P. 6 **HP9114 Empowerer**

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and a normal wall outlet, and you can run your HP9114 forever.

See P. 33 **Flowcharting II+**

This program creates professional-looking flowcharts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels both inside and outside the shapes. Easy to add and delete lines without disturbing the rest of the flowchart. "Shrink Screen" feature lets you view up to 14″ × 11″ chart on 25-line screen. (Runs on Portable Plus only.)

See P. 34 **HPrint**

A multi-featured program that takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more—all of which you specify from a simple menu or by means of sensible control codes. (For example, @U toggles underline, @H lets you specify a header, @L toggles 6/8 lines per inch, etc. There's no need to know your HP printer's less obvious control codes because they're already programmed in.) HPrint also does mail merging, and it lets you create your own graphic characters (integral signs, Greek alpha, etc.).

See P. 42 **LINK HP-IL Connector**

A software program that lets you transfer data from any HP-IL device to any other HP-IL device. Now you can access your main computer (HP Portable, HP150, or IBM PC), its unlimited storage capability, and all its peripherals from your HP41, 71, 75, or series 80 hand-held!

See P. 25 **Logitech Mouse for the Portable PLus**

A 3-button mouse for the Portable Plus, bundled with our proprietary Portable Mouse Software and special connecting cable. Using the mouse instead of arrow keys to move the screen cursor makes using your Plus easier and more fun. You can assign a different keystroke to each of the mouse's buttons for each of your applications (Lotus, word processing, etc.). The Logitech mouse was rated Editor's Choice by PC Magazine.

See P. 40 **101 Macros for Lotus 1-2-3**

Useful in themselves and also as learning tools for novices and experts alike, these macros include: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, addressing form letters, and printing labels automatically. Customized for Lotus 1A and Lotus 2.01.

See P. 10 **Mobile Recharger**

Lets you recharge your Portable, ThinkJet, HP9114, HP hand-held computer, etc. from your car's cigarette lighter.

See P. 15 **The Norton Utilities —Customized For The Portables**

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized Personalized Software to include an extra 3½″ disk (formerly available only on 5¼″ disk) with each package sold. The disk includes The Norton Utilities, additional utilities, and instructions for running The Norton Utilities on the Portables and the HP150. Both version 4.0 and the Advanced Edition are now available.

1987 Portable Paper Subscriber's Disk

Software on disk includes (1) DISKPACK, a pack utility that can work with subdirectories, usable with Edisc, external disks, hard disks. Commercial equivalent sells for $50. (2) Time Manager's Calendar Utility. Prints WEEK-AT-A-GLANCE calendar from Time Manager's appointments list to the ThinkJet. (3) HP Calculator program (4) C Drive Copy Utility. Copies file from one disk to another WITHOUT having to copy file first to your Portable. (5) Other suprise goodies, including game and Lotus templates.

See P. 6 **Power Cube**

Powers and recharges up to four HP devices (HP Portable, ThinkJet, HP9114, HP hand-held, etc.) from a *single* wall outlet.

See P. 33 **PrinterTalk and Format110: MemoMaker Enhancers**

These two independently developed programs expand the formatting capabilities of MemoMaker. With **PrinterTalk** you can change type styles in the middle of a document, change number of copies and lines per page, do automatic page numbering, and much more. **Format110** lets you format headers, footers and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more. Purchase both products at the same time and receive a 33% discount (subscribers only).

Private File

Protects your confidential letters, documents, spreadsheets, programs, and data communication files. Private File scrambles your file so only you can understand it.

3 Project Management Packages

All 3 work on the HP110, Plus, HP150, and IBM PC. **Project 8-9-10**, a Lotus template, helps you manage small to medium projects. **Milestone** is also for small to medium projects. (On HP110, you need to scroll to see entire Milestone screen.) **Pertmaster** is for medium to large projects (specify which machine). All three are reviewed in Vol. 1, Issue 6 of The Portable Paper.

Inside front cover **2-Megabyte RAM card**

A giant leap in memory size for the Portable Plus. Simply remove your existing RAM drawer and replace it with this card. You'll have enough internal memory to run the largest application and still have lots of E-Disk storage for other programs and data. Works with any Portable Plus with 512K of built-in memory. We will accept your old RAM drawer and any extra memory as a trade-in towards purchase.

Personalized Software

Products that make HP Portables smarter

P.O. Box 869, Fairfield, Iowa 52556 515 472-6330

Inside front cover **RAM/ROM Card**

A megabyte of RAM plus four pairs of ROM slots. (The ROM drawer that comes with the Plus has six pairs of ROM slots.) Add the RAM/ROM card to your Portable Plus and you have a megabyte of extra RAM in addition to space for Lotus (2 ROM slots), Reflection (2 slots), Webster's Spelling Checker (2 slots), MemoMaker/Time Manager (1 slot), and SuperROM (The Editor, SideWinder, Shelp, Mini-PrinterTalk, and Format110 all in one ROM slot). Webster's and SuperROM are available from Personalized Software. We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase.

See P. 12 **RightWriter**

Flags errors in grammar, style, usage, and punctuation, inserting comments directly into your document. Also produces overall critique of document (strength of delivery, use of jargon, grade level). Uses more than 2,200 rules and a 45,000 word dictionary, and works with most word processors. Also available: **RightWords** dictionary extension utility for RightWriter: it has 7 auxiliary dictionaries (including business, computers, and engineering), and also lets you add words of your own to RightWriter's built-in dictionary.

See P. 2 **Software on ROM**

Many of our best-selling programs are available on ROM chips via our ROM Backup service. (Portable Plus only.) Saves valuable electronic disk space, minimizes need for disk drive. **Custom ROMs** also available.

See P. 35 **Shelp**

Whether you're in a Lotus spreadsheet, a MemoMaker memo, or almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros—that is, assign up to 31 characters to a single keystroke. Written exclusively for the Portable Plus.

See P. 27 **SideWinder**

This program, written specifically for the HP Portables, the HP150, and the ThinkJet printer, allows you to print your spreadsheets (or any other text file) sideways. This means you can print your 60 column by 53 row spreadsheet on the ThinkJet from your Portable as one long printout without cutting and pasting.

See P. 24 **Sketch**

A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Fill shapes with light or dark solid. Five character sets can be displayed normally, sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be saved for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory.

See P. 33 **Soft Padded Cases**

Roomy, rugged, high-quality, highly padded cases to protect your ThinkJet, HP9114, and HP Portable when traveling.

Tiger Fox

A great video game of changing mazes and double pursuit. First video game designed for the Portables.

Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3½″disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper subscribers only.)

See P. 13 **T/Master and T/Maker**

T/Master is a fully integrated word processor, speller, relational database manager, spreadsheet, file manager, and communications package that also includes keyboard macros and bar chart graphics. It runs on the Portable Plus without modification, and on the HP150 with a PC emulator. **T/Maker** is an earlier version of T/Master; it runs on the HP110 Portable with an external disk drive. T/Maker does not include the communications module. Both programs are more integrated than any other package on the market. (For example, the same editing commands are used in all the modules.) The full-featured word processor even has some features that WordPerfect lacks. The spreadsheet shows the formulas along the borders clearly visible at all times. The database manager is easy to use, and is comparable in its power to dBase III. Our reviewer says, ". . . there is no other application I know of that matches the power, thoroughness, and simple elegance of T/Master."

See P. 21 **Borland Turbo Pascal —Customized For The Portables**

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, memory consumption, and programmer environment. The WordStar-type editor alone is worth the price. Borland has authorized Personalized Software to include an extra disk with their product customizing the Turbo editor to The Portables' editing keys. The **Turbo Pascal Starter Kit** includes **Turbo Pascal, Turbo Pascal Tutor 2.0** (a step-by-step interactive tutorial on Turbo Pascal programming), and **Portable Pascal Programs** (a double-sided disk with more than 50 program examples for the Portables). Also available: **Turbo Toolbox** (includes Pascal sort and search routines that create database/file-management system).

See P. 38 **Typing Whiz**

Better than almost any typing tutor program on the market—designed specifically for The Portables and the HP150. Immediate numeric and graphic feedback of your progress.

See P. 8 **Used HP Portable Equipment**

The Portable Equipment Exchange, a division of Personalized Software, buys and sells used HP Portables, Portable Pluses, HP9114s, HP ROMs and RAMs for the Portable Plus. Because of HP quality, used HP products are a great buy. 30-day return policy on all used equipment we sell.

Volume Discounts

Corporate buyers, users groups, and HP dealers: Order products and subscriptions from us in quantity and save.

Back cover **Webster's Spelling Checker**

Rated Editor's Choice by PC Magazine, this spelling checker packs a hefty 110,000-word dictionary into just 207K of disk memory. Webster's shows you incorrect spellings in context and suggests corrections, also lets you preview questionable words before you edit. Excellent user interface—exceptionally easy to learn and use. Customized for the Portable Plus and HP150.

See P. 43 **WordPerfect 4.2**

Disk based Portable Plus version of the best-selling word processing package. Includes spelling checker and thesaurus.

See P. 17 **The Word Plus**

An excellent spelling checker with a choice of two dictionaries—45,000 words and 35,000 words— plus the ability to input additional words and abbreviations of your own. Also does word counts. Customized to the HP Portables.

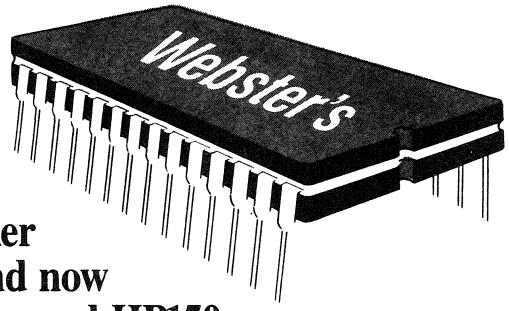
See P. 39 **WordStar Professional 4.0**

With over 125 new features, this latest release fulfills the wish lists of WordStar users everywhere. This most venerable and highly popular word processor (over 1.5 million users worldwide) now includes an undo feature, on-screen display of boldface and underline, multiple-line headers and footers, keyboard macros, line and box drawing, improved spelling correction, and overall higher speed. Works with Portable Plus and HP150. (Note: Built-in 220,000 word thesaurus does not run on the Portable Plus.)

See P. 19 **WorldPort 2400 Portable Modem**

A battery-powered, highly compact (4″ × 2″ × 1″), lightweight (6.5 oz.), full-featured external modem that transmits data at 300, 1200, and 2400 baud. Ideal for HP Portable users who want higher speed than provided by HP's internal modems. The WorldPort 2400 is fully compatible with the industry-standard Hays AT Command Set, and with both the CCITT and Bell communications standards. Also available: WorldPort 1200 modem (transmits at 300 and 1200 baud).

Portable Plus users: At last! A great spelling checker available on ROM!



Webster's (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Shuster, Inc.

PC Magazine rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over *110,000 words* in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure.* It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually
- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spellling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

RECOMMENDED FOR:			
HP110 Portable		Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•
Available on ROM Backup for the Portable Plus			

Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 . . . . . $79.95
$69.95 for Portable Paper subscribers.

Webster's is available on ROM backup for an additional $179. See ROM ad in this issue for important details.

WEBSTER'S SPELLING CHECKER works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.

Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
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HP Portable users: Sorry, WEBSTER'S won't run on the 110; your best bet is THE WORD PLUS, another top-rated spelling checker available from Personalized Software. (See ad in this issue.)

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